

Supplementary Information for:
Public reactions to hospitals after adverse events involving AI

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Study 1

Supplementary Table 1. Means, Standard Deviations, Correlations

Variables	M	SD	1	2
1. Responsibility Attribution to Hospital	5.20	1.57		
2. Complaint to Hospital	5.19	1.88	.73***	
3. Legal Action to Hospital	4.85	2.08	.63***	.87***

** $p < .05$; ** $p < .01$, *** $p < .001$*

Supplementary Analyses

To examine whether the effects observed in Study 1 varied across countries, we conducted additional analyses testing country as a moderator and covariate.

In Study 1, the majority of participants were from the United Kingdom ($n = 282$), followed by the United States ($n = 8$) and six other countries ($n = 9$). Given the small sample sizes outside the UK, participants were grouped into UK versus non-UK categories for subsequent analyses.

Moderation Analyses

We first examined whether country moderated the effect of condition on participants' responses. In these analyses, Condition (AI-only, Human-only, Human-AI Collaboration) served as the independent variable, Country (UK vs. non-UK) served as the moderator, and perceived responsibility, likelihood of filing a complaint, and likelihood of pursuing legal action were analyzed as dependent variables in separate ANOVAs.

Across all outcome measures, no significant Condition $\times$ Country interaction effects were observed, indicating that the effect of condition did not differ by country.

For perceived responsibility, there was a significant main effect of Condition, $F(2, 292) = 6.77, p = .001, \eta^2_p = .04$, whereas the main effect of Country was not significant, $F(1, 292) = .19, p = .662, \eta^2_p = .001$. The Condition $\times$ Country interaction was also not significant, $F(2, 292) = .94, p = .392, \eta^2_p = .006$.

For complaint likelihood, the main effect of Condition was significant, $F(2, 292) = 8.31, p < .001, \eta^2_p = .05$, while the main effect of Country was not significant, $F(1, 292) = .16, p = .687, \eta^2_p = .001$. The Condition $\times$ Country interaction was again not significant, $F(2, 292) = 1.74, p = .177, \eta^2_p = .01$.

For legal action likelihood, there was a significant main effect of Condition, $F(2, 292) = 6.86, p = .001, \eta^2_p = .05$, whereas the main effect of Country was not significant, $F(1, 292) = .002, p = .965, \eta^2_p = .00$. The Condition $\times$ Country interaction was not significant, $F(2, 292) = 1.81, p = .166, \eta^2_p = .01$.

Main Effects with Country as a Covariate

We next examined whether the effects of condition remained when statistically controlling for country. In these analyses, Condition (AI-only, Human-only, Human-AI Collaboration) served as the independent variable, Country (UK vs. non-UK) was included as a covariate, and perceived responsibility, complaint likelihood, and legal action likelihood were analyzed as dependent variables in separate ANCOVAs.

Across all outcomes, the main effect of condition remained significant, and the overall pattern of results was consistent with those reported in the main manuscript.

For perceived responsibility, there was a significant main effect of condition, $F(2, 294) = 14.10$, $p < .001$, $\eta^2_p = .09$. Pairwise comparisons indicated that perceived responsibility was significantly higher in the AI-only condition ($M = 5.80$, 95% CI [5.51, 6.10]) than in the Human-AI condition ($M = 5.10$, 95% CI [4.81, 5.40], $p = .001$) and the human-only condition ($M = 4.67$, 95% CI [4.36, 4.97], $p < .001$). Perceived responsibility was also significantly higher in the Human-AI condition than in the human-only condition ($p = .046$).

For complaint likelihood, the main effect of condition was significant, $F(2, 294) = 12.94$, $p < .001$, $\eta^2_p = .08$. Participants reported significantly higher likelihood of filing a complaint in the AI-only condition ($M = 5.88$, 95% CI [5.52, 6.23]) than in the Human-AI condition ($M = 5.11$, 95% CI [4.76, 5.46], $p = .003$) and the human-only condition ($M = 4.57$, 95% CI [4.20, 4.93], $p < .001$). Complaint likelihood was also significantly higher in the Human-AI condition than in the human-only condition ($p = .038$).

For legal action likelihood, there was again a significant main effect of condition, $F(2, 294) = 9.07$, $p < .001$, $\eta^2_p = .06$. Legal action likelihood was significantly higher in the AI-only condition ($M = 5.46$, 95% CI [5.07, 5.86]) than in the Human-AI condition ($M = 4.82$, 95% CI [4.43, 5.21], $p = .024$) and the human-only condition ($M = 4.23$, 95% CI [3.82, 4.64], $p < .001$). Legal action likelihood was also significantly higher in the Human-AI condition than in the human-only condition ($p = .042$).

Overall, these supplementary analyses indicate that the effects of condition observed in Study 1 were consistent across UK and non-UK participants.

Study 2

Supplementary Table 2. Means, Standard Deviations, Correlations

Variables	M	SD	1	2
1. Responsibility Attribution to Hospital	5.27	1.51		
2. Complaint to Hospital	5.04	1.91	.61***	
3. Legal Action to Hospital	4.27	2.17	.48***	.75***

* $p < .05$; ** $p < .01$, *** $p < .001$

Supplementary Analyses

To examine whether the effects observed in Study 2 varied across countries, we conducted additional analyses testing country as a moderator and covariate.

In Study 2, participants were primarily from the United Kingdom ($n = 356$), followed by the United States ($n = 182$), Nigeria ($n = 19$), and 19 other countries ($n = 45$). For the purposes of additional analyses, participants were grouped into three categories: United Kingdom, United States, and other countries.

Moderation Analyses

To examine whether the effects of condition varied by country, we conducted moderation analyses in which condition served as the independent variable, country (UK vs. US vs. other countries) served as the moderator, and perceived responsibility, likelihood of filing a complaint, and likelihood of pursuing legal action were examined as dependent variables in separate ANOVAs.

Across all outcome measures, no significant Condition $\times$ Country interaction effects were observed, indicating that the effect of condition did not differ by country.

AI-only vs. Autonomous Collaboration vs. Human-only

For perceived responsibility, there was a significant main effect of Condition, $F(2, 354) = 5.07$, $p = .007$, $\eta^2_p = .03$, whereas the main effect of Country was not significant, $F(2, 354) = .27$, $p = .766$, $\eta^2_p = .002$. The Condition $\times$ Country interaction was not significant, $F(4, 354) = 1.77$, $p = .135$, $\eta^2_p = .02$.

For complaint likelihood, the main effect of Condition was significant, $F(2, 354) = 10.15$, $p < .001$, $\eta^2_p = .05$, whereas the main effect of Country was not significant, $F(2, 354) = .09$, $p = .912$, $\eta^2_p = .001$. The Condition $\times$ Country interaction was not significant, $F(4, 354) = .49$, $p = .741$, $\eta^2_p = .01$.

For legal action likelihood, there was a significant main effect of Condition, $F(2, 354) = 5.18$, $p = .006$, $\eta^2_p = .03$. The main effect of Country was not significant, $F(2, 354) = 1.84$, $p = .161$, $\eta^2_p = .01$, and the Condition $\times$ Country interaction was not significant, $F(4, 354) = .37$, $p = .831$, $\eta^2_p = .004$.

AI-only vs. Sequential Collaboration vs. Human-only

For perceived responsibility, there was a significant main effect of Condition, $F(2, 353) = 4.29$, $p = .014$, $\eta^2_p = .02$. Neither the main effect of Country, $F(2, 353) = .08$, $p = .924$, $\eta^2_p = .00$, nor the Condition $\times$ Country interaction, $F(4, 353) = .73$, $p = .570$, $\eta^2_p = .01$, was significant.

For complaint likelihood, the main effect of Condition was significant, $F(2, 353) = 6.92$, $p = .001$, $\eta^2_p = .04$, whereas the main effect of Country, $F(2, 353) = .22$, $p = .803$, $\eta^2_p = .001$, and the Condition $\times$ Country interaction, $F(4, 353) = .17$, $p = .952$, $\eta^2_p = .002$, were not significant.

For legal action likelihood, there was a significant main effect of condition, $F(2, 353) = 4.09$, $p = .018$, $\eta^2_p = .02$. The main effect of country, $F(2, 353) = .29$, $p = .751$, $\eta^2_p = .002$, and the Condition $\times$ Country interaction, $F(4, 353) = .51$, $p = .731$, $\eta^2_p = .006$, were not significant.

AI-only vs. Interactive Collaboration vs. Human-only

For perceived responsibility, there was a significant main effect of Condition, $F(2, 351) = 7.26$, $p < .001$, $\eta^2_p = .04$, whereas the main effect of country, $F(2, 351) = .15$, $p = .857$, $\eta^2_p = .001$, and the Condition $\times$ Country interaction, $F(4, 351) = 0.70$, $p = .590$, $\eta^2_p = .01$, were not significant.

For complaint likelihood, the main effect of Condition was significant, $F(2, 351) = 6.74$, $p = .001$, $\eta^2_p = .04$. The main effect of country, $F(2, 351) = .13$, $p = .882$, $\eta^2_p = .001$, and the Condition $\times$ Country interaction, $F(4, 351) = .43$, $p = .791$, $\eta^2_p = .005$, were not significant.

For legal action likelihood, there was a significant main effect of Condition, $F(2, 351) = 4.17$, $p = .016$, $\eta^2_p = .02$. Neither the main effect of country, $F(2, 351) = 1.39$, $p = .251$, $\eta^2_p = .01$, nor the Condition $\times$ Country interaction, $F(4, 351) = .63$, $p = .644$, $\eta^2_p = .01$, was significant.

Main Effects with Country as a Covariate

We next examined whether the effects of Condition remained when statistically controlling for country. Separate ANCOVAs were conducted for each dependent variable including country as a covariate. Across autonomous, sequential, and interactive collaboration comparisons, the main effect of Condition remained significant for perceived responsibility, likelihood of filing a complaint, and likelihood of pursuing legal action.

When comparing autonomous collaboration with AI-only and human-only conditions, the main effect of condition was significant for perceived responsibility, $F(2, 359) = 13.57$, $p < .001$, $\eta^2_p = .07$; complaint likelihood, $F(2, 359) = 12.78$, $p < .001$, $\eta^2_p = .07$; and legal action likelihood, $F(2, 359) = 6.85$, $p = .001$, $\eta^2_p = .04$. Across all outcomes, responses in the autonomous collaboration condition were significantly higher than those in the human-only condition but did not differ from those in the AI-only condition; responses in the AI-only condition were also significantly higher than those in the human-only condition.

When comparing sequential collaboration with AI-only and human-only conditions, the main effect of condition was significant for perceived responsibility, $F(2, 358) = 8.98$, $p < .001$, $\eta^2_p = .05$; complaint likelihood, $F(2, 358) = 9.77$, $p < .001$, $\eta^2_p = .05$; and legal action likelihood, $F(2, 358) = 5.65$, $p = .004$, $\eta^2_p = .03$. Across all outcomes, responses in the sequential collaboration condition were significantly higher than those in the human-only condition but did not differ from those in the AI-only condition.

When comparing interactive collaboration with AI-only and human-only conditions, the main effect of condition was significant for perceived responsibility, $F(2, 356) = 10.39, p < .001, \eta^2_p = .06$; complaint likelihood, $F(2, 356) = 9.38, p < .001, \eta^2_p = .05$; and legal action likelihood, $F(2, 356) = 5.56, p = .005, \eta^2_p = .03$. Responses in the interactive collaboration condition were significantly lower than those in the AI-only condition for perceived responsibility and complaint likelihood and did not differ from those in the human-only condition on these outcomes. For legal action likelihood, responses in the interactive condition were directionally lower than those in the AI-only condition ($p = .073$) and did not differ from the human-only condition.

Pairwise comparisons and estimated marginal means for all conditions are reported in Supplementary Table S3.

Overall, these supplementary analyses indicate that the effects of condition observed in Study 2 were consistent across countries.

Supplementary Table 3. Pairwise Comparisons across Conditions

		vs. AI only	vs. Human only
	Mean (95% CI)	P-value	P-value
Responsibility			
AI only	5.59 (5.34 – 5.83)		< .001
Autonomous	5.68 (5.43 – 5.93)	.605	< .001
Sequential	5.38 (5.12 – 5.64)	.177	.005
Interactive	4.87 (4.60 – 5.15)	< .001	.978
Human only	4.82 (4.58 – 5.07)		
Complaint			
AI only	5.43 (5.11 – 5.75)		< .001
Autonomous	5.49 (5.16 – 5.82)	.810	< .001
Sequential	5.20 (4.87 – 5.54)	.357	.001
Interactive	4.65 (4.30 – 4.99)	.002	.360
Human only	4.43 (4.10 – 4.75)		
Legal Action			
AI only	4.62 (4.23 – 5.01)		.001
Autonomous	4.64 (4.24 – 5.04)	.938	.002
Sequential	4.34 (3.96 – 4.72)	.334	.023
Interactive	4.09 (3.70 – 4.48)	.068	.168
Human only	3.72 (3.33 – 4.11)		