

ATOM Round 1 – Report and summaries

Period: 20 November 2024 – 09 February 2025 (82 days)

Total attempts at survey: 968

Total completed (with duplicates removed): 454

Figure 1: Overview of ATOM accruals by week according to stakeholder group

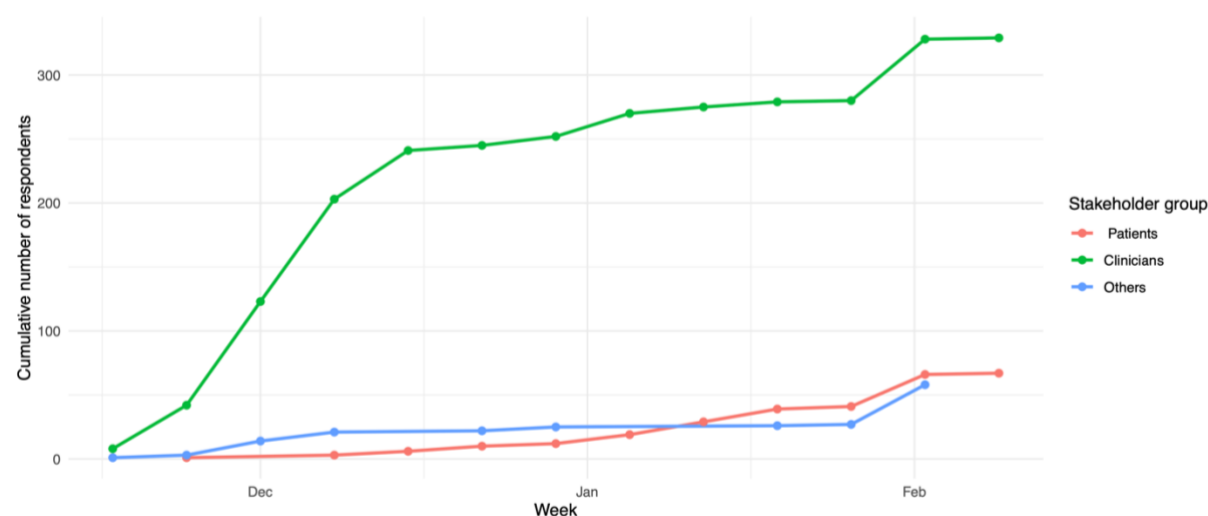


Figure 2: Proportion of participants according to stakeholder group

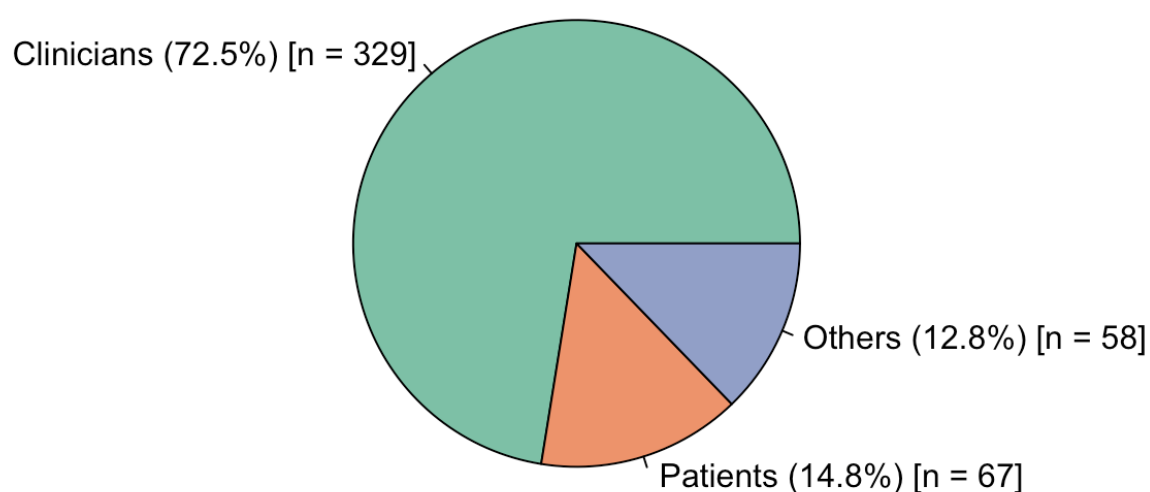


Table 1: Stakeholder counts according to stakeholder category and subcategory

Stakeholder group		Count (%)
Clinicians	Physician (involved in airway management)	282 (62%)
Patients	I have experienced airway management as a patient	65 (14%)
Others	Researcher (≥ 5 airway management related publications)	46 (10%)
Clinicians	Other healthcare personnel (involved in airway management)	30 (6.6%)
Clinicians	Nurse (involved in airway management)	17 (3.7%)
Others	Other	7 (1.5%)
Others	Journal editor	4 (0.9%)
Patients	I am a relative to a patient who experienced airway management	2 (0.5%)
Others	Policy-maker, regulator	1 (0.2%)

Figure 3: Geographic distribution of participants

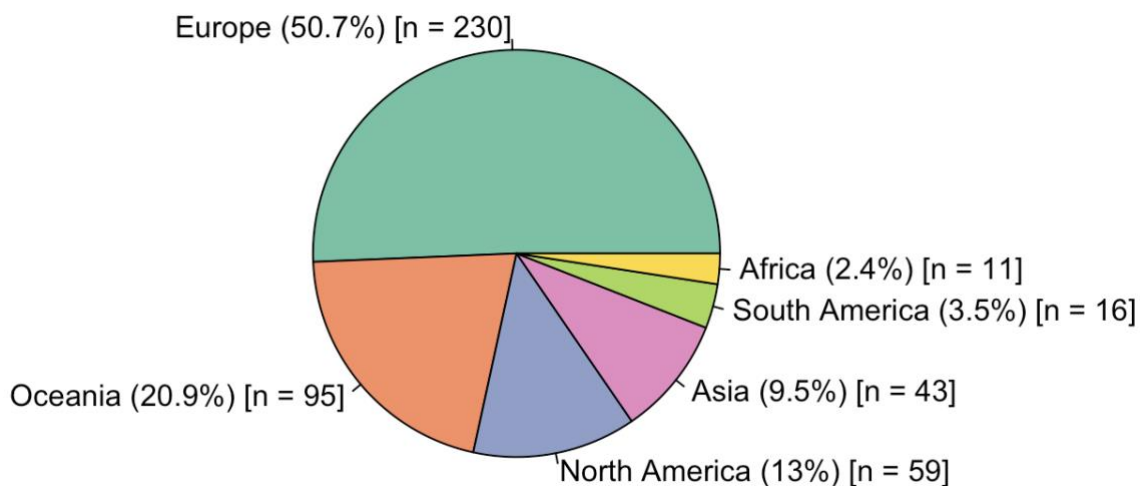
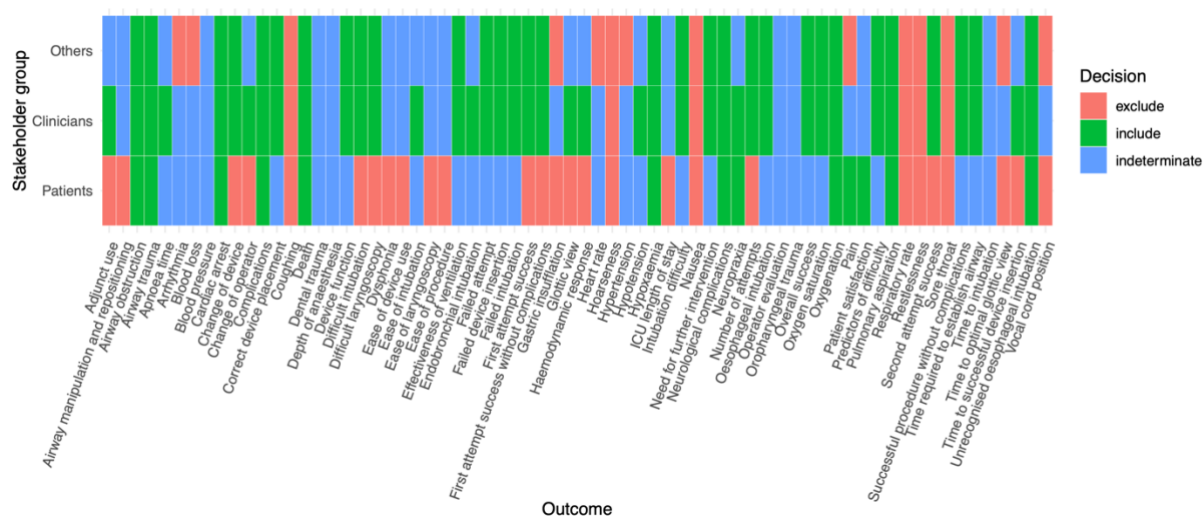


Figure 4: Heatmap of decisions according to stakeholder group

Table 2: Outcomes to be **included** following Round 1 by all stakeholder groups (n = 10)

Outcome	ATOM Category	Decision
Airway obstruction	Adverse events	Include
Airway trauma	Adverse events	Include
Pulmonary aspiration	Adverse events	Include
Cardiac arrest	Adverse events	Include
Complications	Adverse events	Include
Hypoxaemia	Adverse events	Include
Death	Adverse events	Include
Neurological complications	Adverse events	Include
Unrecognised oesophageal intubation	Adverse events	Include
Oxygenation	Physiology	Include

Table 3: Outcomes to be **excluded** following Round 1 by all stakeholder groups (n = 6)

Outcome	ATOM Category	Decision
Respiratory rate	Physiology	Exclude
Coughing	Other	Exclude
Hoarseness	Patient-reported outcomes	Exclude
Nausea	Patient-reported outcomes	Exclude
Restlessness	Patient-reported outcomes	Exclude
Sore throat	Patient-reported outcomes	Exclude

Table 4: Detailed outcomes according to decision by stakeholder group

Code	Outcome	Stakeholder group	Rating		Decision
			7 to 9 (%)	1 to 3 (%)	
Q64	Respiratory rate	Patients	43	6	Exclude
		Clinicians	49	12	Exclude
		Others	33	24	Exclude
Q68	Coughing	Patients	39	15	Exclude
		Clinicians	32	20	Exclude
		Others	28	21	Exclude
Q32	Hoarseness	Patients	43	21	Exclude
		Clinicians	48	8	Exclude
		Others	50	9	Exclude
Q33	Nausea	Patients	45	18	Exclude
		Clinicians	34	19	Exclude
		Others	26	26	Exclude
Q37	Restlessness	Patients	48	16	Exclude
		Clinicians	36	18	Exclude
		Others	24	33	Exclude
Q38	Sore throat	Patients	42	18	Exclude
		Clinicians	34	19	Exclude
		Others	40	10	Exclude
Q39	Airway obstruction	Patients	81	0	Include
		Clinicians	93	0	Include
		Others	81	3	Include
Q40	Airway trauma	Patients	72	3	Include
		Clinicians	87	0	Include
		Others	83	2	Include
Q42	Pulmonary aspiration	Patients	75	1	Include
		Clinicians	92	1	Include
		Others	88	2	Include
Q44	Cardiac arrest	Patients	85	0	Include
		Clinicians	96	1	Include
		Others	91	2	Include
Q45	Complications	Patients	75	4	Include
		Clinicians	86	0	Include
		Others	83	3	Include
Q48	Hypoxaemia	Patients	75	1	Include
		Clinicians	94	0	Include
		Others	93	0	Include
Q50	Death	Patients	79	0	Include
		Clinicians	96	1	Include
		Others	93	0	Include
Q51	Neurological complications	Patients	82	1	Include
		Clinicians	92	1	Include
		Others	86	3	Include
Q55	Unrecognised oesophageal intubation	Patients	78	0	Include
		Clinicians	94	1	Include
		Others	93	3	Include
Q63	Oxygenation	Patients	73	1	Include
		Clinicians	93	1	Include
		Others	90	3	Include

Q41	Arrhythmia	Patients	63	6	Indeterminate
		Clinicians	61	5	Indeterminate
		Others	48	14	Indeterminate
Q43	Blood loss	Patients	64	1	Indeterminate
		Clinicians	55	12	Indeterminate
		Others	36	29	Indeterminate
Q46	Dental trauma	Patients	58	9	Indeterminate
		Clinicians	60	3	Indeterminate
		Others	66	7	Indeterminate
Q47	Endobronchial intubation	Patients	58	4	Indeterminate
		Clinicians	70	2	Indeterminate
		Others	66	12	Indeterminate
Q52	Oesophageal intubation	Patients	69	1	Indeterminate
		Clinicians	84	1	Indeterminate
		Others	86	2	Indeterminate
Q53	Oropharyngeal trauma	Patients	61	10	Indeterminate
		Clinicians	64	4	Indeterminate
		Others	66	5	Indeterminate
Q1	Adjunct use	Patients	39	13	Indeterminate
		Clinicians	74	2	Indeterminate
		Others	67	3	Indeterminate
Q2	Airway manipulation and repositioning	Patients	37	15	Indeterminate
		Clinicians	68	5	Indeterminate
		Others	55	2	Indeterminate
Q3	Change of device	Patients	37	15	Indeterminate
		Clinicians	78	2	Indeterminate
		Others	78	2	Indeterminate
Q4	Change of operator	Patients	37	15	Indeterminate
		Clinicians	75	1	Indeterminate
		Others	62	3	Indeterminate
Q5	Correct device placement	Patients	58	7	Indeterminate
		Clinicians	88	1	Indeterminate
		Others	81	3	Indeterminate
Q6	Device function	Patients	66	10	Indeterminate
		Clinicians	77	2	Indeterminate
		Others	74	5	Indeterminate
Q7	Difficult intubation	Patients	46	7	Indeterminate
		Clinicians	90	1	Indeterminate
		Others	86	3	Indeterminate
Q8	Difficult laryngoscopy	Patients	45	7	Indeterminate
		Clinicians	84	1	Indeterminate
		Others	76	2	Indeterminate
Q9	Ease of procedure	Patients	45	6	Indeterminate
		Clinicians	68	4	Indeterminate
		Others	55	9	Indeterminate
Q10	Ease of device use	Patients	37	7	Indeterminate
		Clinicians	67	5	Indeterminate
		Others	60	5	Indeterminate
Q11	Ease of intubation	Patients	51	7	Indeterminate
		Clinicians	71	4	Indeterminate
		Others	62	5	Indeterminate
Q12	Ease of laryngoscopy	Patients	39	6	Indeterminate

		Clinicians	69	4	Indeterminate
		Others	60	5	Indeterminate
Q13	Failed attempt	Patients	52	7	Indeterminate
		Clinicians	85	1	Indeterminate
		Others	79	3	Indeterminate
Q14	Failed device insertion	Patients	54	10	Indeterminate
		Clinicians	88	0	Indeterminate
		Others	78	3	Indeterminate
Q15	Failed intubation	Patients	61	7	Indeterminate
		Clinicians	96	0	Indeterminate
		Others	91	0	Indeterminate
Q16	First attempt success	Patients	40	10	Indeterminate
		Clinicians	81	3	Indeterminate
		Others	88	0	Indeterminate
Q17	First attempt success without complications	Patients	49	9	Indeterminate
		Clinicians	81	3	Indeterminate
		Others	86	3	Indeterminate
Q18	Glottic view	Patients	34	7	Indeterminate
		Clinicians	79	1	Indeterminate
		Others	69	3	Indeterminate
Q19	Intubation difficulty	Patients	51	6	Indeterminate
		Clinicians	86	1	Indeterminate
		Others	71	2	Indeterminate
Q21	Need for further intervention	Patients	54	9	Indeterminate
		Clinicians	83	0	Indeterminate
		Others	76	5	Indeterminate
Q22	Number of attempts	Patients	49	10	Indeterminate
		Clinicians	84	0	Indeterminate
		Others	83	0	Indeterminate
Q23	Overall success	Patients	67	6	Indeterminate
		Clinicians	89	2	Indeterminate
		Others	86	2	Indeterminate
Q24	Second attempt success	Patients	42	9	Indeterminate
		Clinicians	78	2	Indeterminate
		Others	74	2	Indeterminate
Q25	Successful procedure without complications	Patients	67	6	Indeterminate
		Clinicians	84	2	Indeterminate
		Others	79	3	Indeterminate
Q26	Time required to establish airway	Patients	51	9	Indeterminate
		Clinicians	74	3	Indeterminate
		Others	74	3	Indeterminate
Q27	Time to optimal glottic view	Patients	33	10	Indeterminate
		Clinicians	57	9	Indeterminate
		Others	48	12	Indeterminate
Q28	Time to intubation	Patients	51	7	Indeterminate
		Clinicians	70	5	Indeterminate
		Others	69	0	Indeterminate
Q29	Time to successful device insertion	Patients	48	12	Indeterminate
		Clinicians	71	4	Indeterminate
		Others	64	3	Indeterminate
Q56	Blood pressure	Patients	61	7	Indeterminate
		Clinicians	64	6	Indeterminate

		Others	53	12	Indeterminate
Q57	Depth of anaesthesia	Patients	60	4	Indeterminate
		Clinicians	64	6	Indeterminate
		Others	52	14	Indeterminate
Q58	Haemodynamic response	Patients	49	6	Indeterminate
		Clinicians	70	3	Indeterminate
		Others	59	9	Indeterminate
Q59	Heart rate	Patients	55	3	Indeterminate
		Clinicians	59	8	Indeterminate
		Others	36	16	Indeterminate
Q60	Hypertension	Patients	58	10	Indeterminate
		Clinicians	55	7	Indeterminate
		Others	41	12	Indeterminate
Q61	Hypotension	Patients	58	9	Indeterminate
		Clinicians	74	3	Indeterminate
		Others	67	9	Indeterminate
Q62	Oxygen saturation	Patients	67	1	Indeterminate
		Clinicians	93	1	Indeterminate
		Others	93	2	Indeterminate
Q56	Effectiveness of ventilation	Patients	69	3	Indeterminate
		Clinicians	88	2	Indeterminate
		Others	81	5	Indeterminate
Q66	Vocal cord position	Patients	34	10	Indeterminate
		Clinicians	59	8	Indeterminate
		Others	47	16	Indeterminate
Q67	Apnoea time	Patients	54	9	Indeterminate
		Clinicians	71	5	Indeterminate
		Others	62	3	Indeterminate
Q69	Gastric insufflation	Patients	34	15	Indeterminate
		Clinicians	50	10	Indeterminate
		Others	38	10	Indeterminate
Q71	ICU length of stay	Patients	46	6	Indeterminate
		Clinicians	53	8	Indeterminate
		Others	53	14	Indeterminate
Q73	Operator evaluation	Patients	63	12	Indeterminate
		Clinicians	59	6	Indeterminate
		Others	52	12	Indeterminate
Q74	Predictors of difficulty	Patients	55	6	Indeterminate
		Clinicians	81	1	Indeterminate
		Others	71	2	Indeterminate
Q30	Dysphonia	Patients	46	13	Indeterminate
		Clinicians	59	6	Indeterminate
		Others	52	9	Indeterminate
Q34	Neuropraxia	Patients	75	9	Indeterminate
		Clinicians	72	5	Indeterminate
		Others	64	10	Indeterminate
Q35	Pain	Patients	73	4	Indeterminate
		Clinicians	55	6	Indeterminate
		Others	47	9	Indeterminate
Q36	Patient satisfaction	Patients	76	3	Indeterminate
		Clinicians	57	7	Indeterminate
		Others	60	10	Indeterminate

Table 5: New recommended outcomes for Round 2

Outcome	Code	ATOM category	Lay explanation
Time to device competency	Q75	Other	How long did it take clinicians to learn a procedure or become proficient at using a device
Post-operative pulmonary complications	Q76	Adverse events	Were there any unexpected lung problems after the procedure
Post-operative cardiac complications	Q77	Adverse events	Were there any unexpected heart problems after the procedure
Accidental awareness under general anaesthesia	Q78	Adverse events	Was the patient aware of the procedure due to the anaesthetic not working effectively
Cost-effectiveness	Q79	Other	Was the procedure cost-effective when compared to alternatives
Carbon footprint	Q80	Other	What is the environmental impact of this procedure
Front-of-neck airway	Q81	Procedural effectiveness	In the event of a major anaesthetic emergency was the tube inserted through an incision made in the neck