

IMPRESS project - Survey of participating IQM member clinics on structural quality and care processes in ventilated patients

The items were surveyed by means of an electronic questionnaire (implementation via RedCap)

1. Structural and process data in the field of intensive care medicine

Items		Possible answers
1.1 Number of beds in the intensive care unit, annual average 2017		
1.1.1	Internal medicine beds	<input type="checkbox"/> [Number]
1.1.2	Surgical beds	<input type="checkbox"/> [Number]
1.1.3	Total	<input type="checkbox"/> [Number] → Automatically calculated
1.2 How many full time staff are employed in intensive care units (actually filled positions in full time equivalents on an annual average in 2017)?		
	1.2.1 Physicians	<input type="checkbox"/> [Number] Full-time employees
	1.2.2 thereof specialists	<input type="checkbox"/> [Number] Full-time employees
	1.2.3 of which specialists with additional qualification in intensive care medicine	<input type="checkbox"/> [Number] Full-time employees
	1.2.4 registered nursing staff	<input type="checkbox"/> [Number] Full-time employees
	1.2.5 of which registered nurses with additional qualification in anaesthesia and intensive care	<input type="checkbox"/> [Number] Full-time employees
	1.2.6 Physiotherapists	<input type="checkbox"/> [Number] Full-time employees
1.3 Is there an Intermediate Care Station or other transitional care between non-intensive and intensive care?		<input type="checkbox"/> Yes <input type="checkbox"/> No
1.4 Are stroke patients treated in a stroke unit?		<input type="checkbox"/> Yes <input type="checkbox"/> No
1.5 Are patients with acute coronary syndrome treated in a chest pain unit?		<input type="checkbox"/> Yes <input type="checkbox"/> No
1.6 Are patients seen daily by a specialist with an additional qualification in intensive care medicine ?		<input type="checkbox"/> Yes <input type="checkbox"/> No
1.7 Is there a concept to adapt the physician staffing to the current demand (e.g. on-call duty)?		<input type="checkbox"/> Yes <input type="checkbox"/> No
1.8 Medical management of the intensive care unit:		
	1.8.1 Is the intensive care unit managed by a specialist with an additional qualification in intensive care medicine ?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	1.8.2 Does the medical management of the intensive care unit have other clinical tasks?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.9 Is the presence of medical and nursing staff experienced in intensive care medicine guaranteed for 24 hours?		<input type="checkbox"/> Yes <input type="checkbox"/> No
1.10 Is there a concept to adapt the nursing staffing to current demands (e.g. on-call duty)?		<input type="checkbox"/> Yes <input type="checkbox"/> No

1.11 Is there a written training protocol for new staff?		<input type="checkbox"/> Yes for physicians <u>and</u> nurses <input type="checkbox"/> Yes for physicians <input type="checkbox"/> Yes for nurses <input type="checkbox"/> No
1.12 Is there a mentor system in the training phase?		<input type="checkbox"/> Yes <input type="checkbox"/> No
1.13 Are there fixed break regulations?		<input type="checkbox"/> Yes for physicians <u>and</u> nurses <input type="checkbox"/> Yes for physicians <input type="checkbox"/> Yes for nurses <input type="checkbox"/> No
1.14 Are temporary or self-employed staff used in case of personnel shortages?		<input type="checkbox"/> Yes for physicians <u>and</u> nurses <input type="checkbox"/> Yes for physicians <input type="checkbox"/> Yes for nurses <input type="checkbox"/> No
1.15 Which of the measures and standards listed below are available in your intensive care unit?		
	1.15.1 Medical Standard Operating Procedures	<input type="checkbox"/> Fully available <input type="checkbox"/> Partly available <input type="checkbox"/> Not available
	1.15.2 Nursing standards	<input type="checkbox"/> Fully available <input type="checkbox"/> Partly available <input type="checkbox"/> Not available
	1.15.3 Defined standard equipment per intensive care bed	<input type="checkbox"/> Fully available <input type="checkbox"/> Partly available <input type="checkbox"/> Not available
	1.15.4 Daily medical and nursing rounds for each intensive care patient	<input type="checkbox"/> Fully available <input type="checkbox"/> Partly available <input type="checkbox"/> Not available
	1.15.5 Daily visits by an experienced medical specialist and specialist nursing staff with the joint definition of daily goals	<input type="checkbox"/> Fully available <input type="checkbox"/> Partly available <input type="checkbox"/> Not available
	1.15.6 Daily multi-professional and interdisciplinary visits with documentation of daily goals for patient safety, interdisciplinary planning and documentation of therapy concepts and goals	<input type="checkbox"/> Fully available <input type="checkbox"/> Partly available <input type="checkbox"/> Not available
	1.15.7 Structured emergency training	<input type="checkbox"/> Fully available <input type="checkbox"/> Partly available <input type="checkbox"/> Not available
1.16 Which of the fully or partially existing measures and standards from 1.14 are implemented in your intensive care unit?		
	1.16.1 Medical Standard Operating Procedures	<input type="checkbox"/> Fully implemented <input type="checkbox"/> Partly implemented <input type="checkbox"/> Not implemented
	1.16.2 Nursing standards	<input type="checkbox"/> Fully implemented <input type="checkbox"/> Partly implemented <input type="checkbox"/> Not implemented

	1.16.3 Defined standard equipment per intensive care bed	<input type="checkbox"/> Fully implemented <input type="checkbox"/> Partly implemented <input type="checkbox"/> Not implemented
	1.16.4 Daily medical and nursing rounds for each intensive care patient	<input type="checkbox"/> Fully implemented <input type="checkbox"/> Partly implemented <input type="checkbox"/> Not implemented
	1.16.5 Daily visits by an experienced medical specialist and specialist nursing staff with the joint definition of daily goals	<input type="checkbox"/> Fully implemented <input type="checkbox"/> Partly implemented <input type="checkbox"/> Not implemented
	1.16.6 Daily multi-professional and interdisciplinary visits with documentation of daily goals for patient safety, interdisciplinary planning and documentation of therapy concepts and goals	<input type="checkbox"/> Fully implemented <input type="checkbox"/> Partly implemented <input type="checkbox"/> Not implemented
	1.16.7 Structured emergency training	<input type="checkbox"/> Fully implemented <input type="checkbox"/> Partly implemented <input type="checkbox"/> Not implemented

2. Use of quality instruments to improve care for ventilated patients in intensive care

Items	Possible answers
2.1 IQM – Peer Review of the tracer "Ventilation > 24h" in intensive care medicine	
2.2 IQM – Peer Review on another tracer (e.g. heart attack, stroke) in the field of intensive care medicine (maximum of three most recent tracers)	
[Tracer 1]	<input type="checkbox"/> Not applied so far and not planned <input type="checkbox"/> No applied so far, but planned <input type="checkbox"/> applied before 2016 <input type="checkbox"/> applied 2016 <input type="checkbox"/> applied 2017 <input type="checkbox"/> applied 2018
[Tracer 2 (fade in only when 1 is filled)]	<input type="checkbox"/> Not applied so far and not planned <input type="checkbox"/> No applied so far, but planned <input type="checkbox"/> applied before 2016 <input type="checkbox"/> applied 2016 <input type="checkbox"/> applied 2017 <input type="checkbox"/> applied 2018
[Tracer 3 (fade in only when 2 is filled)]	<input type="checkbox"/> Not applied so far and not planned <input type="checkbox"/> No applied so far, but planned <input type="checkbox"/> applied before 2016 <input type="checkbox"/> applied 2016 <input type="checkbox"/> applied 2017 <input type="checkbox"/> applied 2018
2.3 Other peer reviews (e.g. DIVI, internal PR etc.) in the field of intensive care medicine (maximum of three topical areas)	
[Theme 1]	<input type="checkbox"/> Not applied so far and not planned <input type="checkbox"/> No applied so far, but planned <input type="checkbox"/> applied before 2016 <input type="checkbox"/> applied 2016 <input type="checkbox"/> applied 2017 <input type="checkbox"/> applied 2018
[Theme 2]	<input type="checkbox"/> Not applied so far and not planned <input type="checkbox"/> No applied so far, but planned <input type="checkbox"/> applied before 2016 <input type="checkbox"/> applied 2016 <input type="checkbox"/> applied 2017 <input type="checkbox"/> applied 2018
[Theme 3]	<input type="checkbox"/> Not applied so far and not planned <input type="checkbox"/> No applied so far, but planned <input type="checkbox"/> applied before 2016 <input type="checkbox"/> applied 2016 <input type="checkbox"/> applied 2017 <input type="checkbox"/> applied 2018

2.4 morbidity and mortality conferences in intensive care defined according to the guidelines for interdisciplinary M&M conferences (including recorded and justified case selection, presentation, discussion and analysis with derivation of measures and implementation control)		
<i>*Reference: Rohn, C. & Martin, J. Leitfaden für interdisziplinäre M&M-Konferenzen, In: Martin J, Rink O, Zacher J (Hrsg.) Handbuch IQM</i>		
2.5 Other interventions in the field of intensive care medicine, e.g. error reporting systems and qualification measures (maximum of three most recent interventions)		
	[Intervention 1]	<input type="checkbox"/> Not applied so far and not planned
	[Intervention 2] (fade in only when 1 is filled)]	<input type="checkbox"/> No applied so far, but planned
	[Intervention 3] (fade in only when 2 is filled)]	

3. Implementation of the selected quality instruments

Items	Possible answers
A3.1 IQM - Peer Review of the tracer "Ventilation > 24h" [year of application according to 2.1]	
Variant A: These questions are only asked if a peer review protocol including a summary in the intervention group is available	
A3.1.1. Peer review protocol [annual data according to 2.1: quality objectives, proposed solutions and action plan]	
A3.1.1.1 Have the quality objectives and proposed solutions of the peer review protocol [year as per 2.1] been communicated internally?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
A3.1.1.2 If yes, to whom were the quality objectives and proposed solutions of the peer review protocol [year as per 2.1] communicated?	<input type="checkbox"/> To the medical management <input type="checkbox"/> To nursing management <input type="checkbox"/> To administrative Management <input type="checkbox"/> To quality Management <input type="checkbox"/> To other functional areas: [Text Field]
A2.1.1.3 Was an action plan derived for the achievement of the quality objectives or implementation of the proposed solutions of the peer review protocol?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
A3.1.1.3.1 The following potential for improvement, proposed solutions, responsibilities and deadlines for implementation were identified in the summary of the Peer Review Protocol [annual details according to 2.1]: [Line by line improvement potential, proposed solutions, responsibilities and implementation deadlines]	Potential for improvement: [automated listing from the protocol of the intervention group]
	Proposed solutions: [automated listing from the protocol of the intervention group]
	Responsibilities: [automated listing from intervention group protocol]
	Deadlines for transposition: [automated listing from the intervention group protocol]
A3.1.1.3.2. Has solution [XX] been included in a plan of action? XX [each named solution proposal from the list in A3.1.1.3.1 is queried]	<input type="checkbox"/> Yes, unchanged, the following measure has been derived [text field]. <input type="checkbox"/> Yes, but modified and the following measure was derived [text field] <input type="checkbox"/> No, because [text field] <input type="checkbox"/> Not known/ Not specified
A3.1.1.3.3 If yes, was the action plan implemented within the deadline?	<input type="checkbox"/> Yes, complete in accordance with the above-mentioned deadline <input type="checkbox"/> Yes Complete, but different from the above-mentioned deadline for transposition since [date field] <input type="checkbox"/> Yes, implementation has started but is not yet complete <input type="checkbox"/> No, implementation has not yet started because [text field] <input type="checkbox"/> Not known/ Not specified
A3.1.1.4 Were the peer review summary, analysis criteria or self-assessment [year specified in 2.1] used to propose solutions, followed by an action plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
A3.1.1.4.1 If yes, which	[manual entry]
A3.1.1.4.2 If yes, have all measures already been implemented?	<input type="checkbox"/> Yes, complete since [date field]. <input type="checkbox"/> Yes, implementation has started but is not yet complete <input type="checkbox"/> No, implementation has not yet started because [text field] <input type="checkbox"/> Not known/ Not specified
A3.1.1.5 Was the analysis of the peer review [year] used to identify follow-up actions that were not included in the peer review summary?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported

		A3.1.1.5.1 If yes, which	[manual entry]
		A3.1.1.5.2 If yes, have all measures already been implemented?	<input type="checkbox"/> Yes, complete since [date field] <input type="checkbox"/> Yes, implementation has started but is not yet complete <input type="checkbox"/> No, implementation has not yet started because [text field] <input type="checkbox"/> Not known/ Not specified
		[Option B: These questions are only asked if no peer review protocol including summary is available (for example, for ventilation peer reviews from previous years or for intervention clinics for which no summary table is available)]	
		B3.1 IQM - Peer Review of the tracer "Ventilation > 24 h" [year of application according to 2.1] Note: This survey block is provided individually for each tracer specified	
		B3.1.1 Peer review protocol [annual data according to 2.1]: quality objectives, proposed solutions and plan of action	
		B 3.1.1.1 Which quality objectives have been derived from the peer review [annual data according to 2.1]?	[manual entry]
		B3.1.1.2 Were the quality objectives communicated internally?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
		B3.1.1.3 If yes, to whom were the quality objectives communicated internally?	<input type="checkbox"/> To the medical management <input type="checkbox"/> To nursing management <input type="checkbox"/> To administrative Management <input type="checkbox"/> To quality Management <input type="checkbox"/> To other functional areas: [Text Field]
		B3.1.1.4 Were the summary, analysis criteria or self-assessment of the peer review [year specified in 2.1] used to derive proposed solutions followed by an action plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
		B3.1.1.4.1 If yes, has the action plan been implemented?	<input type="checkbox"/> Yes, complete since [date field]. <input type="checkbox"/> Yes, implementation has started but is not yet complete <input type="checkbox"/> No, implementation has not yet started because [text box] <input type="checkbox"/> Not known/ Not specified

3.2 IQM - Peer Review of another tracer in intensive care [Tracer XX from 2.2]		
Note: This survey block is provided separately for each tracer specified]		
3.2.1 Peer review protocol for the tracer [text XX of 2.2]: Quality objectives + proposed solutions and action plans		
	3.2.1.1 Which quality objectives were derived from the Peer Review on the tracer [queryXX of 2.2]?	[manual entry]
	3.2.1.2 Were the quality objectives communicated internally?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
	3.2.1.3 If yes, to whom were the quality objectives communicated internally?	<input type="checkbox"/> To the medical management <input type="checkbox"/> To nursing management <input type="checkbox"/> To administrative Management <input type="checkbox"/> To quality Management <input type="checkbox"/> To other functional areas: [manual entry]
	3.2.1.4 Were the summary, the analysis criteria or the self-assessment of the Peer Review on the tracer [query XX from 2.2] used to derive proposals for solutions and subsequently an action plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
	3.2.1.4.1 If yes, has the action plan been implemented?	<input type="checkbox"/> Yes, complete since [date field]. <input type="checkbox"/> Yes, implementation has started but is not yet complete <input type="checkbox"/> No, implementation has not yet started because [manual entry] <input type="checkbox"/> Not known/ Not specified

3.3 Other peer reviews in intensive care medicine [query of 2.3]		
Note: This survey block is provided separately for each specified topic area		
3.3.1 Peer review protocol on the topic [query of 2.3]: Quality objectives + proposed solutions and action plans		
	3.3.1.1 Which quality objectives were derived from the Peer Review in the thematic area [topic XX of 2.3]?	[manual entry]
	3.3.1.2 Were the quality objectives communicated internally?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
	3.3.1.3 If yes, to whom were the quality objectives communicated internally?	<input type="checkbox"/> To the medical management <input type="checkbox"/> To nursing management <input type="checkbox"/> To administrative Management <input type="checkbox"/> To quality Management <input type="checkbox"/> To other functional areas: [manual entry]
	3.3.1.4 Were the summary, analysis criteria or self-assessment of the peer review on topic [topic XX of 2.3] used to derive proposed solutions and a subsequent action plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
	3.3.1.4.1 If yes, has the action plan been implemented?	<input type="checkbox"/> Yes, complete, since [date field]. <input type="checkbox"/> Yes, implementation has started but is not yet complete <input type="checkbox"/> No, implementation has not yet started because [manual entry] <input type="checkbox"/> Not known/ Not reported

3.4 Morbidity and mortality conferences		
	3.4.1 Which groups of people are involved in the organisation of the morbidity and mortality conferences?	<input type="checkbox"/> To the medical management <input type="checkbox"/> To nursing management <input type="checkbox"/> To administrative Management <input type="checkbox"/> To quality Management <input type="checkbox"/> To other functional areas: [manual entry]
	3.4.2 Did the morbidity and mortality conferences result in proposals for solutions and a subsequent action plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
	3.4.2.1 If yes, has the action plan been implemented?	<input type="checkbox"/> Yes, complete, since [date field]. <input type="checkbox"/> Yes, implementation has started but is not yet complete <input type="checkbox"/> No, implementation has not yet started because [text box] <input type="checkbox"/> Not known/ Not reported

3.5 Other interventions in intensive care [Intervention XX from 2.5]		
Note: This survey block is provided separately for each specified intervention		[manual entry](expandable field with "+")
	3.5.1 Which groups of people are involved in the implementation?	<input type="checkbox"/> To the medical management <input type="checkbox"/> To nursing management <input type="checkbox"/> To administrative Management <input type="checkbox"/> To quality Management <input type="checkbox"/> To other functional areas: [Text field]
	3.5.2 Were proposals for solutions and subsequently an action plan derived from this intervention?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not known/ Not reported
	3.5.2.1 If yes, has the action plan been implemented?	<input type="checkbox"/> Yes, complete, since [date field]. <input type="checkbox"/> Yes, implementation has started but is not yet complete <input type="checkbox"/> No, implementation has not yet started because [manual entry] <input type="checkbox"/> Not known/ Not reported

4. Assessment of changes on the basis of the quality instruments used (e.g. peer review, M&M conferences)

Items	Possible answers
4.1 How do you judge the changes on the structural level of your intensive care unit caused by the use of the quality instruments (e.g. staff, technical equipment)?	<input type="checkbox"/> Mainly improvements were noticed <input type="checkbox"/> Mainly deteriorations were noticed <input type="checkbox"/> Both improvements and deteriorations were noticed <input type="checkbox"/> No changes were noticed <input type="checkbox"/> Not known/ Not reported
4.1.1 Which improvements have you noticed?	[Manual entry]
4.1.2 In your opinion, which of the instruments used were relevant to this improvement?	<input type="checkbox"/> IQM - Peer Review of the Tracer Ventilation > 24h [year(s) according to 2.1] <input type="checkbox"/> IQM - Peer Review of another tracer in intensive care medicine: [Tracer 1,2,3 according to 2.2] <input type="checkbox"/> Other peer reviews in intensive care medicine: [Tracers 1,2,3 according to 2.3] <input type="checkbox"/> morbidity and mortality conferences in intensive care <input type="checkbox"/> Other interventions in intensive care: [Intervention 1,2,3 according to 2.5] <input type="checkbox"/> No assignment possible <input type="checkbox"/> Not known/ Not reported
4.1.3 Which deteriorations have you noticed?	[Manual entry]
4.1.4 In your opinion, which instruments used were relevant to this deterioration?	<input type="checkbox"/> IQM - Peer Review of the Tracer Ventilation > 24h [year(s) according to 2.1] <input type="checkbox"/> IQM - Peer Review of another tracer in intensive care medicine: [Tracer 1,2,3 according to 2.2] <input type="checkbox"/> Other peer reviews in intensive care medicine: [Tracers 1,2,3 according to 2.3] <input type="checkbox"/> morbidity and mortality conferences in intensive care <input type="checkbox"/> Other interventions in intensive care: [Intervention 1,2,3 according to 2.5] <input type="checkbox"/> No assignment possible <input type="checkbox"/> Not known/ Not reported
4.2 How do you judge the changes on the process level of your intensive care medicine caused by the use of the quality instruments (e.g. course of treatment)?	<input type="checkbox"/> Mainly improvements were noticed <input type="checkbox"/> Mainly deteriorations were noticed <input type="checkbox"/> Both improvements and deteriorations were noticed <input type="checkbox"/> No changes were noticed <input type="checkbox"/> Not known/ Not reported
4.2.1 Which improvements have you noticed?	[Manual entry]
4.2.2 In your opinion, which of the instruments used were relevant to this improvement?	<input type="checkbox"/> IQM - Peer Review of the Tracer Ventilation > 24h [year(s) according to 2.1] <input type="checkbox"/> IQM - Peer Review of another tracer in intensive care medicine: [Tracer 1,2,3 according to 2.2] <input type="checkbox"/> Other peer reviews in intensive care medicine: [Tracers 1,2,3 according to 2.3] <input type="checkbox"/> morbidity and mortality conferences in intensive care <input type="checkbox"/> Other interventions in intensive care: [Intervention 1,2,3 according to 2.5] <input type="checkbox"/> No assignment possible <input type="checkbox"/> Not known/ Not reported
4.2.3 Which deteriorations have you noticed?	[Manual entry]
4.2.4 In your opinion, which instruments used were relevant to this deterioration?	<input type="checkbox"/> IQM - Peer Review of the Tracer Ventilation > 24h [year(s) according to 2.1] <input type="checkbox"/> IQM - Peer Review of another tracer in intensive care medicine: [Tracer 1,2,3 according to 2.2] <input type="checkbox"/> Other peer reviews in intensive care medicine: [Tracers 1,2,3 according to 2.3] <input type="checkbox"/> morbidity and mortality conferences in intensive care <input type="checkbox"/> Other interventions in intensive care: [Intervention 1,2,3 according to 2.5] <input type="checkbox"/> No assignment possible <input type="checkbox"/> Not known/ Not reported

<p>4.3 How do you judge the changes caused by the use of the quality instruments (e.g. patient satisfaction, mortality, (co)morbidity,...) at the outcome level of your intensive care unit?</p>	<input type="checkbox"/> Mainly improvements were noticed <input type="checkbox"/> Mainly deteriorations were noticed <input type="checkbox"/> Both improvements and deteriorations were noticed <input type="checkbox"/> No changes were noticed <input type="checkbox"/> Not known/ Not reported
<p>4.3.1 Which improvements have you noticed?</p>	<p>[Manual entry]</p>
<p>4.3.2 In your opinion, which of the instruments used were relevant to this improvement?</p>	<input type="checkbox"/> IQM - Peer Review of the Tracer Ventilation > 24h [year(s) according to 2.1] <input type="checkbox"/> IQM - Peer Review of another tracer in intensive care medicine: [Tracer 1,2,3 according to 2.2] <input type="checkbox"/> Other peer reviews in intensive care medicine: [Tracers 1,2,3 according to 2.3] <input type="checkbox"/> morbidity and mortality conferences in intensive care <input type="checkbox"/> Other interventions in intensive care: [Intervention 1,2,3 according to 2.5] <input type="checkbox"/> No assignment possible <input type="checkbox"/> Not known/ Not reported
<p>4.3.3 Which deteriorations have you noticed?</p>	<p>[Manual entry]</p>
<p>4.3.4 In your opinion, which instruments were responsible for this deterioration?</p>	<input type="checkbox"/> Mainly improvements were noticed <input type="checkbox"/> Mainly deteriorations were noticed <input type="checkbox"/> Both improvements and deteriorations were noticed <input type="checkbox"/> No changes were noticed <input type="checkbox"/> Not known/ Not reported