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What do patients and relatives see as key competencies for intensive care doctors?

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1 Acknowledgements

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2 Executive Summary

Doctors working in intensive care units have to deal with critical clinical problems that require high level technical skills and knowledge, and their patients are often unconscious or otherwise incapacitated. In this high-pressured environment it is often difficult to assess individual patients' wishes, but research on their views, together with those of their families and friends, can help us to determine these preferences.

The Competency-Based Training in Intensive Care in Europe (CoBaTrICE) project is a pan-European project which aims to harmonise standards of specialist training in intensive care medicine in the European Union. Using consensus techniques, Cobatrice has invited all stakeholders in Intensive Care Medicine – critical care professionals, trainers and trainees, patients and relatives – to participate in the identification and prioritisation of core competencies. As a partner in this work, the Picker Institute organised surveys in eight European countries (the Czech Republic, Denmark, Italy, the Netherlands, Poland, Spain, Switzerland and the United Kingdom) to obtain views from patients and relatives on the knowledge, skills and attitudes that intensive care doctors need in order to provide high quality patient-centred care.

A questionnaire was developed based on a review of the literature on patients' and relatives experiences and preferences in intensive care, and a small number of qualitative in-depth interviews. The questionnaire was distributed to users of intensive care in eight European countries, through a network of clinicians. One thousand, three hundred and ninety-one completed questionnaires were returned.

This exploratory survey confirms that what matters most to patients and relatives in thinking about the doctors who treat them is their medical skills and experience. Decisiveness in decision making, clinical knowledge and the ability to act calmly in a crisis were almost uniformly described as essential qualities in the intensive care doctor. The ability to exchange information and communicate effectively with patients and relatives were also seen as important qualities, in particular dealing sensitively with the anxieties of patients and their relatives. Survey respondents tended to see clinical decision-making as the key part of the doctor's domain, so finding out what patients think and feel, giving patients full information, and involving them in decisions about treatment and care were accorded lower priority.

There are some differences between different parts of Europe; for example, patients and relatives in Eastern and Southern European countries place less emphasis on the involvement of patients/relatives in decision-making and on the doctors' communication and interpersonal skills than do those in Northern countries.

Patients ascribe higher importance than relatives to competencies which relate to patient information, involving patients in decision-making about care and treatment and giving full information to patients even when they might find it upsetting. Relatives are, on the other hand, more inclined to see giving bad news in a caring way and treating patients as individuals as key qualities.

There is very little variation by age group, but there are gender differences, with women being more likely than men to describe giving patients the opportunity to ask questions, discussing fears and anxieties and involving patients and relatives in decisions, as essential.

3 Introduction: Patient and Carer Perspectives on Intensive Care

Research on patients' experience of intensive care shows, as one would expect, how vulnerable people are when critically ill, and that stays on the intensive care unit (ICU) are often recalled as distressing, stressful, uncomfortable and painful experiences. For example, in one American study (Cochran & Ganong, 1989) patients reported that having tubes in one's nose or mouth, being stuck with needles, being in pain, and not being able to sleep, are the most stressful aspects. Factors such as this contribute to what is often referred to as 'ICU syndrome', characterised by disorientation, confusion and delusions. This syndrome, although partly due to being critically ill in itself, is also thought to result from the experience of being in an ICU, which may include fear about what is happening, feelings of loss of control, isolation from normal life and exhaustion. In such circumstances what patients and relatives want of their doctors may well be different from what is important to active, fully conscious patients in their own homes.

It is not an easy topic for research, for both ethical and methodological reasons. For instance, it would be unethical to observe or interview patients at a time of great stress; and on methodological grounds one may query whether patients can recall their time on an ICU in order to discuss it later. However, despite these concerns there has been a good deal of research on patients and relatives and their ICU experiences. These studies have generally been conducted after the lapse of varying periods of time from discharge from the Unit and have provided good evidence that the majority of patients can recall much of their experience (Elpern, Patterson, Gloskey, & Bone, 1992; Stein-Parbury & McKinley, 2000).

Although there is an absence of research specifically on patients' or families' views of ICU medical staff there is information about their views on the ICU experience in general, some of which relates to the doctors (though more usually to nurses). We particularly examined qualitative research (published within the past fifteen years) in order to identify the kinds of issues patients and their relatives raised about the medical care, rather than quantitative research which would have developed its instruments from the findings of such qualitative investigations. For example a recent questionnaire survey of family members of patients in ICUs in Canada (Heyland et al., 2002) found high levels of overall family satisfaction with the care given, respondents' greatest satisfaction being with nursing skill and competence, the compassion and respect given to the patient and pain management; they were least satisfied with waiting room atmosphere and the frequency of physician communication. But the participants in this survey could only comment on aspects of care which were included in the survey.

Qualitative research on patient and family experiences has begun to appear in the last two decades (see Lam & Beaulieu, 2004), and has started to expand our knowledge of the complexity of the experience. From the themes elicited in individual depth interviews or focus group studies one can extrapolate the qualities patients and relatives value in medical staff. For example, an Australian focus group interview study of ex-ICU patients (McKinley, Nagy, Stein-Parbury, Bramwell, & Hudson, 2002) drew out not only the personal themes of lack of sleep, panic, cognitive changes and the presence or absence

of family members, but also the staff-related themes of: (i) the need to be told what was happening (including having questions answered, explanations given in ways one can understand, one's relatives kept informed) and (ii) the need to feel that the staff cared about one and that one was being treated as a person rather than an object.

These are key themes which recur in most of the qualitative studies (for a useful synthesis of such research see Stein-Parbury & McKinley, 2000), though they are complex issues and there is not always consistency within or between studies. So, on the frequently mentioned theme of information, it was seen as very important by relatives that doctors explained things clearly and fully and in an unrushed way (Burr, 1998; Buchman, Ray, Wax, Cassell, Rich, & Niemczycki, 2003; McKinley et al., 2002), and doctors were criticised most often for failing to give straight answers. But they could also be criticised for being too abrupt in imparting information. And in a self-case-study Rier (2000) concluded that it was very important for patients not to be told the full truth when they were in a critical state in order that their recovery could be aided by a continuing sense of hope. The theme of hope is also highlighted in a literature review of studies of the relationship between relatives and ICU nursing staff (Holden, Harrison, & Johnson, 2002) where the key role of staff in giving information, support and hope is identified.

The caring and support role of staff is most often identified as a job for nurses rather than doctors, though not exclusively so (Granberg, Bergbom Engberg, & Lungberg, 1998). Both patients and relatives talk about the need for patients to be made to feel secure (Granberg et al., 1998). And it is said that the sense of vulnerability is increased by impersonal care, where patients feel ignored or staff talk about them as if they were not there (Holland, Harrison, & Johnson, 1997; McKinley et al., 2002). But the less 'warm' qualities of professional competence and skill are also mentioned by relatives and patients, where being 'in good hands' or cared for by clinically competent staff is seen as part of having a positive ICU experience (Burfitt, Greiner, Miers, Kinney, & Branyon, 1993), as is having one's pain attended to by staff skilled in pain relief who work well as members of a clinical team (Puntillo, 1990). However, in some contexts competence is seen as a broader concept, which includes "a range of caring behaviour and related skills" (Cescutti-Butler & Galvin, 2003) or an overarching feeling by family members that they want "their loved ones to receive the best possible care" which includes being kept well-informed, learning about what is happening and being present to watch the care being administered (Lam & Beaulieu, 2004).

This qualitative research is therefore useful in identifying the qualities or traits expected of a doctor in intensive care even though its use is limited by the emphasis on the overall patient experience rather than on the medical care. Because it is qualitative it gives little guide to the factors which may affect the views of patients or relatives, though it is clear that there are differences in view between patients; for example, Wong (1995) found that a greater need for information was expressed by patients and relatives when there had been an emergency rather than a planned admission.

For a survey of patients' views of ICU doctors it is clearly important to use previous research on the views of patients in ICUs, but it is also useful to include the views of other kinds of patient especially where they relate particularly to the qualities of doctors. So for example, patients in general want their doctors to be humane, competent, technically skilled, and to give patients the chance to be involved in their care (Coulter, 2002). Nonetheless, it is clear that we have very little knowledge specifically of what ICU

patients and their relatives want of their ICU doctors, and the survey reported here is very much a pioneer study.

This survey is part of an extensive European-Union sponsored programme of work, co-ordinated through the European Society for Intensive Care Medicine, whose aim is to identify the core competencies for intensive care doctors across Europe, which can then be incorporated into their training and thus foster the mobility of intensive care specialists throughout Europe.

4 Methods of Investigation

4.1 Data collection

A postal survey by self-completion questionnaire was carried out in eight European countries: the Czech Republic, Denmark, Italy, the Netherlands, Poland, Spain, Switzerland and the United Kingdom. It was a challenging study in that people who have just experienced critical illness cannot be expected to expend much time or concentration on research; it was therefore important to keep the questionnaire short and straightforward. We had to rely on staff in the Units to distribute the questionnaires to eligible patients and relatives (see below), and we have no information about the populations of ICU patients with which to compare our samples. The survey is the first of its kind and must therefore be seen as exploratory.

The essence of the questionnaire was a series of statements about the qualities of ICU doctors which respondents were asked to evaluate according to their perceived importance. Twenty-one statements were developed following our review of previous research on patients' and carers' perspectives on the role of the intensive care doctor (see above) and four qualitative interviews with patients and carers with experience of intensive care. The questionnaire deliberately did not ask about patients' and relatives' own experience of intensive care, but only about the qualities they saw as most important for an intensive care doctor. These elements related to three general themes: a) medical skills and knowledge, b) communication and interpersonal skills, and c) clinical decision-making. People were not asked to rank the competencies, but we did include two questions asking them to compare the importance of some key aspects of professional competence: whether it is more important that doctors in intensive care are good at communicating with patients and relatives than that they are expert at providing treatment, and whether experience on the job is more important in making a good intensive care doctor then keeping up-to-date with the latest research and new developments. Respondents were given space to add their own comments or any other important medical competencies they would wish to see included. The questionnaire concluded with questions about gender, year of birth, education, status (patient or relative) and length of time in intensive care on this occasion.

Respondents were asked to rate the twenty-one qualities (see Table One) according to one of four categories: Essential (importance score: 4), Very important (importance score: 3), Not too important (score: 2), and Doesn't matter (score: 1).

Table One: Statements on the qualities and competencies of an ICU doctor

Doctors in intensive care should...
be decisive when action is needed
carry out practical procedures on patients skillfully
do everything possible to control pain
inform patients about the care they will need in the future
have up-to-date knowledge about illness and how to treat it
give patients opportunity to ask questions
give patients full information even when it might upset them
discuss with patients their fears and anxieties
explain things in ways patients and relatives can understand
give bad news in a caring way
be courteous and polite
give relatives opportunity to ask questions
not give information that might upset patients
not talk in front of patients as if they were not there
handle crises calmly
involve patients in decisions about care and treatment
Involve close relatives in decisions about care and treatment
work well as member of a team
treat patients as individuals
listen to patients
find out what relatives think and feel

Participating countries were selected from all EU/EEA member states to ensure a spread of responses across European regions (North/South, East/West). The questionnaire was translated into national languages and distributed through a project network, which included two senior clinicians (a National Coordinator and a Deputy National Coordinator) in each country. In the eight countries taking part in the survey the project network identified ten intensive care units (ICUs) in ten different hospitals (though in some countries responses were only received from 8 or 9 ICUs), and an ICU contact within each Unit. The ICU contact was subsequently sent a number of questionnaires in proportion to the size of the ICU, for distribution among patients and patients' relatives in the unit. The survey was approved by research ethics committees where required. Recruitment took place over two months in each ICU.

The questionnaire, a prepaid response envelope and an information sheet was handed during the ICU contact's shift to patients who were being transferred out of ICU (either to a side ward, to another ward or to their own home), and to the closest relative of patients currently in the ICU. The questionnaire was not distributed to patients or relatives who were under 15 years of age, were experiencing serious psychological distress, had a cognitive and/or psychiatric illness, who could not read or write in the national language, or to relatives who were not the patient's spouse, parent, sibling or adult child.

This means of distributing the questionnaire was chosen because it was judged to be the only way in which the survey could be carried out simultaneously in eight European countries, and the best way to ensure full patient confidentiality. Its disadvantage was that non-respondents could not be followed up with further prompts and reminders. For these reasons a relatively modest response was anticipated.

4.2 Data analysis

Between 400 and 600 questionnaires were dispatched to the ICU contacts in each country, but no data were available on how many questionnaires were actually distributed to patients and relatives and therefore response rates could not be calculated.

Relative importance of qualities was assessed by comparing both the mean ratings and the percentage of respondents assigning the competences to each of the four categories. However, respondents tended not to choose the lowest two importance categories (i.e. Not so important and Does not matter) and therefore all responses were dichotomised into an Essential and a Less than essential category, with the latter category comprising the original categories Very important, Not too important, and Does not matter.

This is a descriptive survey to identify the key qualities of ICU doctors preferred by patients and relatives. However, we were also interested in whether views differed by sample characteristics such as:

- Age (for example, do younger people have stronger preferences than older people for full information and involvement in decisions? Do older people have stronger preferences than younger people for doctors to take control and show decisiveness?)
- Gender (for example, do women think it more important than men that ICU doctors are good communicators? Do men place more emphasis on doctors' clinical skills and medical knowledge than women?)
- Whether the respondent is a patient or relative (For instance, do patients think it less important than relatives that relatives are given full information and are involved in decisions? Do they think it more important than relatives that patients are given full information and are involved in decision)?
- Region of Europe (For example, do respondents in Northern Europe have stronger preferences than those in Eastern or Southern European countries for full information and involvement in clinical decision-making? Do respondents in Eastern or Southern European countries have stronger preferences for doctors to take control and show decisiveness in decision-making? Is it more important for respondents in North Europe that relatives are allowed a role in decision-making about treatment?)

To answer these and other questions, statement ratings were aggregated and compared at group level. Responses from Denmark, the Netherlands, Switzerland, and United Kingdom were grouped as the North European region. The South region was created by aggregating responses from Italy and Spain, and the East region comprised the Czech Republic and Poland.

Comparisons were made on individual statements and on a set of overarching themes, that is, those previously identified themes of: medical skills and knowledge, communication and interpersonal skills and involvement of patients/relatives in decision

making. These three sets were creating by aggregating statements relating to each theme (see Table Two).

Table Two: Themes of Medical Competence

Theme	*Statements*
Medical skills and knowledge	Be decisive when action is needed
	Have up-to-date knowledge about illness and treatment
	Handle crises calmly
	Work well as member of a team
	Carry out practical procedures skilfully
	Do everything possible to control pain
Communication and interpersonal skills	Explain things in ways patients and relatives can understand
	Give bad news in a caring way
	Not talk in front of patients as if they were not there
	Inform patients about the care they will need in the future
	Be courteous and polite
	Give patients opportunity to ask questions
	Give relatives opportunity to ask questions
	Give patients full information even when it might upset them
Involvement of patients/relatives in decision-making	Treat patients as individuals
	Listen to patients
	Discuss with patients their fears and anxieties
	Involve patients in decisions about care and treatment
	Involve relatives in decisions about care and treatment
	Find out what relatives think and feel

There is of course a certain degree of overlap between these themes and scope for discussion on how individual statements fit into them. Some aspects of communication and interpersonal skills will, for example, have an impact on involvement of patients in decision making and the themes cannot be completely separated from each other conceptually. One statement which did not fit well within any of the themes was excluded, namely 'Doctors in intensive care should not give information that is upsetting'.

Independent samples t-tests were used to test significance levels on differences in mean ratings by groups with two factors (e.g. gender, patient/relative). For variables with three or more groups (e.g. age group, region), one-way ANOVA have been used, and multiple comparisons between individual groups have been made using the Sheffé test. In order

to test significance of differences in ratings of single statements (on elements of professional competence), mean ratings were calculated based on dichotomised ratings ('Essential', importance score 1, and 'Less than essential', importance score 2). Differences in ratings of themes were based on means of original, i.e. non-dichotomised, ratings (Essential, score 1, Very important, score 2, Not too important, score 3 and Doesn't matter, score 4). Hence, the lower the mean importance rating the more important the element of professional competence is considered to be by the aggregated group.

5 Results

5.1 Response

One thousand three hundred and ninety-one completed questionnaires were returned from a total of 70 intensive care units. Strong responses were received from Spain (21% of the total sample), Italy (18%) and Poland (16%), whereas the response from the UK (6%), the Netherlands (7%), and Denmark (7%) was somewhat weaker. In Spain and Italy there was a particularly high proportion of relatives to patients, but the same pattern emerged for 'low response countries' such as Denmark and to some extent the Netherlands, and a shortfall of relative respondents in some countries does not explain the disparity in response.

Table Three: Status and gender of respondents by country

Country	*Patient*	*Relative*	*Male*	*Female*	*Total number of questionnaires returned*	*Percentage of total sample*
Czech Republic	43%	57%	44%	56%	137	10%
Denmark	29%	71%	47%	53%	96	7%
Italy	12%	88%	42%	58%	249	18%
Netherlands	32%	68%	52%	48%	88	6%
Poland	42%	58%	41%	59%	222	16%
Spain	28%	72%	48%	53%	285	21%
Switzerland	52%	48%	53%	47%	197	14%
UK	46%	54%	50%	50%	117	8%
Total	**34%**	**66%**	**46%**	**54%**	**1391**	**100%**

Women slightly outnumbered men, particularly in Italy and Poland, and relatives outnumbered patients by two to one. The mean age of the sample as a whole (Table Five) was 51 years (56 years for patients and 48 years for relatives), with Denmark having the highest mean age for patients and the Czech Republic the lowest.

Table Four: Age of respondents

Age group	*Responses*	*Percent of sample*
35 or younger	259	19%
36 – 50 yrs	398	29%
51 – 65 yrs	422	31%
Over 65 yrs	286	21%
Total	**1365**	**100%**
Not stated	26	-
Total	**1391**	-

Table Five: Mean ages of respondents from each country

Country	*Mean age (/years)*	*Patients' mean age (/years)*	*Relatives' mean age (/years)*
Czech Republic	50	51	49
Denmark	54	63	50
Italy	48	59	46
Netherlands	54	55	53
Poland	50	54	48
Spain	49	56	46
Switzerland	56	59	53
UK	56	57	54
Overall	**51**	**56**	**49**

There were differences between countries in the length of stay of patients in intensive care units. Examining only those who had been discharged (bearing in mind that relatives were handed the questionnaire whilst the patient was still in the ICU while patients received theirs on discharge) the table shows that patients tended to stay in the ICU for a relatively short period, but that it was considerably longer in Italy than elsewhere and shorter in Switzerland and Denmark (though numbers are very small).

Table Six: Length of stay in intensive care by patients discharged from ICU

Country	*Up to 2 days*	*3 - 10 days*	*11 - 28 days*	*More than 28 days*	*Base (n)*
Czech Republic	17%	54%	17%	12%	59
Denmark	54%	32%	11%	4%	28
Italy	25%	29%	25%	21%	29
Netherlands	48%	26%	22%	4%	27
Poland	16%	54%	17%	13%	88
Spain	25%	58%	8%	9%	78
Switzerland	49%	42%	5%	3%	99
UK	33%	47%	14%	6%	52
Total	**31%**	**47%**	**13%**	**9%**	**460**

Table shows responses attributable to patients only; responses from relatives are excluded.

5.2 Rating the importance of competencies

A 'ceiling effect' was evident in the importance rating of almost all the 21 competencies (see Table Seven), with competencies most frequently rated either "Essential" or "Very important". This had been expected: all the competencies were positive qualities, apart from 'not giving information that is upsetting', which nowadays many people would see as unacceptable and full disclosure as the norm; 43% of respondents stated that this quality was either 'not so important' or that it did not matter, and fewer than one in five saw it as an essential competency.

Table Seven: Importance ratings of competencies

Competency	*Essential*	*Very important*	*Not so important*	*Does not matter*	*Mean rating*[1]
Be decisive when action is needed	74%	25%	1%	0%	1.26
Have up-to-date knowledge about illness and treatment	69%	29%	2%	0%	1.31
Handle crises calmly	66%	32%	2%	0%	1.34
Carry out practical procedures skillfully	61%	36%	2%	0%	1.39
Do everything possible to control pain	60%	38%	2%	0%	1.40
Explain in ways patients can understand	60%	38%	2%	0%	1.40
Treat patients as individuals	59%	35%	4%	2%	1.41

Competency	*Essential*	*Very important*	*Not so important*	*Does not matter*	*Mean rating*[1]
Work well as member of a team	58%	35%	6%	1%	1.42
Give bad news in a caring way	51%	43%	5%	2%	1.49
Not talk as if the patient is not there	49%	39%	8%	3%	1.51
Listen to patients	48%	44%	7%	1%	1.52
Inform patients about future care	48%	45%	7%	1%	1.52
Be courteous and polite	47%	46%	6%	0%	1.53
Discuss fears and anxieties with patients	45%	47%	7%	1%	1.55
Give relatives opportunity to ask questions	41%	50%	8%	1%	1.59
Give patients opportunity to ask questions	38%	54%	7%	1%	1.62
Involve relatives in decisions about care and treatment	28%	44%	22%	6%	1.72
Involve patients in decisions about care and treatment	26%	47%	21%	7%	1.74
Give patients full information even when upsetting	26%	42%	27%	6%	1.74
Find out what relatives think and feel	24%	45%	25%	6%	1.76
Not give information that is upsetting	20%	37%	30%	13%	1.80

[1] Mean ratings calculated based on dichotomised variables. Lower mean rating indicates higher importance.

To cope with the ceiling effect the ratings were dichotomised into *Essential* and *Less than essential* (made up of the original categories Very important, Not so important and Does not matter). Highest importance ratings were given to clinical competencies such as decisiveness (74 percent found this an essential quality in an ICU doctor), up-to-date knowledge (69%), and ability to handle crises calmly (66%). At the opposite end of the spectrum were competencies that relate directly to the patient-doctor relationship, such as involving patients in decisions about care and treatment (only 26% saw this as an essential quality), involving relatives of patients (28%) and giving patients full information (26%). However, 'harder' clinical competencies are not uniformly ascribed higher importance than 'softer' communication competencies. Relatively high on the list of essential competencies are qualities such as respect for patients as individuals (59%) and the ability to explain in ways patients can understand (60%).

The questionnaire asked two questions about the relative importance of two potentially conflicting competencies. These were included partly for methodological reasons: we wanted to see whether people could directly discriminate between competing positive qualities. A majority of respondents were either not sure whether one was more important than the other or ascribed equal importance to the two competencies in each

question. Approximately equal proportions (26% & 25%) agreed and disagreed with the statement that talking to patients is more important than being expert at providing treatment, but half were either unsure whether they agreed or disagreed or considered the two competencies equally important. A higher proportion of respondents agreed than disagreed that experience on the job is more important than keeping abreast of the latest developments, but almost three-quarters of respondents were either unsure or ascribed equal importance to the two competencies.

Table Eight: Relative importance of selected competencies

Although doctors in intensive care must be expert at providing treatment, it is even more important that they are good at talking with patients and relatives.

Response	*Number of respondents*	*Percent*
Agree	350	26
Not sure or both	678	50
Disagree	337	25
Total	**1365**	**100**
Not answered	26	-

Experience on the job is more important in making a good intensive care doctor than keeping up to date with the latest research and new developments.

Response	*Number of respondents*	*Percent*
Agree	276	20
Not sure or both	1001	73
Disagree	91	7
Total	**1369**	**100**
Not answered	23	-

These findings emphasise the difficulty of choosing between elements of professional competency, which are all considered desirable qualities. A choice between what is likely to be considered highly important, and maybe even required, qualities for a doctor in ICU, can seem unrealistic and forced. It could be argued that patients and relatives can legitimately expect their doctor to be both experienced, up to date, good at talking to patients and expert at providing treatment.

5.3 Comparisons between sample groups

Differences in ratings of separate competency statements show that patients ascribed higher importance than relatives to competencies which relate to patient information and involving patients in decision-making about their care and treatment. Relatives were, on the other hand, more inclined to see giving bad news in a caring way and treating patients as individuals as important qualities (see Table Nine).

Women were more likely than men to describe giving patients the opportunity to ask questions, discussing fears and anxieties and involving patients and relatives in decisions, as essential (see Table Ten). There was very little difference by age group, with the only significant differences between the mean ratings of these age groups being for the statement “doctors in ICU should explain things in ways patients and relatives can understand”, for which older patients (65+) gave significantly lower importance ratings than patients aged under 50 (see 32).

The ratings of the single qualities also indicate regional differences in the importance ascribed to information giving and patient involvement in decision-making (see Table Eleven for a summary; further details in 30). Respondents in Northern European countries (i.e. Denmark, the Netherlands, Switzerland, and the United Kingdom) gave significantly higher ratings to competencies such as giving patients and relatives an opportunity to ask questions, involving them in decisions about treatment, giving patients full information and listening to patients. There were variations across different statements, though, in which regions of Europe assigned them the highest degrees of importance. Respondents from Southern Europe gave significantly higher ratings of importance than those from Northern Europe for statements relating to doctors treating patients as individuals, explaining in ways patients can understand, and working well as a member of a team. Ratings of importance for these items were also significantly lower in Eastern than in Northern European countries.

Table Nine: Mean ratings for selected single statements by whether patient or relative

Competency	*Groups for comparison*	*Number of respondents*	*Mean rating*[1]	*Sig. (2-tailed).*
Involve patients in decisions about care and treatment	Patient	449	1.69	**.003***
	Relative	879	1.77	
Give pts full information even when upsetting	Patient	449	1.69	**.005***
	Relative	871	1.77	
Explain in ways patients can understand	Patient	453	1.45	**.012***
	Relative	884	1.38	
Give bad news in a caring way	Patient	448	1.55	**.003***
	Relative	877	1.46	
Treat patients as individuals	Patient	450	1.49	**.000***
	Relative	872	1.36	
Involve relatives in decisions about care and treatment	Patient	451	1.75	.083
	Relative	883	1.71	
Find out what relatives think and feel	Patient	449	1.79	.095
	Relative	878	1.75	
Give relatives opportunity to ask questions	Patient	449	1.61	.253
	Relative	876	1.57	

[1] Mean ratings calculated based on dichotomised variables. Lower mean rating indicates higher importance.

Table Ten: Mean ratings for selected single statements by gender

Competency	*Groups for comparison*	*Number of respondents*	*Mean rating*[1]	*Sig. (2-tailed).*
Give pts opportunity to ask questions	Male	620	1.67	.000*
	Female	711	1.57	
Discuss fears and anxieties with pts	Male	615	1.58	.024*
	Female	708	1.52	
Involve patients in decisions about care and treatment	Male	618	1.77	.035*
	Female	711	1.71	
Involve relatives in decisions about care and treatment	Male	621	1.76	.003*
	Female	714	1.69	

[1] Mean ratings calculated based on dichotomised variables. Lower mean rating indicates higher importance.

Table Eleven: Summary of ratings by region of Europe

Statement: Doctors in ICU should…	*Mean rating[1] by region of Europe*			*Significance[2] (between groups)*
	North	*East*	*South*	
Be decisive when action is needed	1.21	1.25	1.32	**< 0.001**
Carry out practical procedures on patients skilfully	1.36	1.36	1.43	**0.023**
Do everything possible to control pain	1.41	1.36	1.43	0.105
Inform patients about the care they will need in the future	1.49	1.53	1.55	0.149
Have up-to-date knowledge about illness and how to treat it	1.31	1.33	1.29	0.450
Give patients opportunity to ask questions	1.55	1.68	1.65	**< 0.001**
Give patients full information even when it might upset them	1.68	1.79	1.77	**< 0.001**
Discuss with patients their anxieties and fears	1.54	1.58	1.54	0.558
Explain in ways patients and relatives can understand	1.41	1.52	1.32	**< 0.001**
Give bad news in a caring way	1.49	1.54	1.47	0.101
Be courteous and polite	1.64	1.46	1.46	**< 0.001**
Give relatives opportunity to ask questions	1.55	1.63	1.59	0.053
Not give information that might upset patients	1.86	1.77	1.78	**0.002**
Not talk in front of patients as if they were not there	1.48	1.52	1.52	0.256
Handle crises calmly	1.32	1.36	1.34	0.561
Involve patients in decisions about care & treatment	1.69	1.79	1.76	**0.001**
Involve relatives in decisions about care & treatment	1.69	1.80	1.70	**0.001**
Work well as a member of a team	1.43	1.54	1.32	**< 0.001**
Treat patients as individuals	1.41	1.52	1.33	**< 0.001**
Listen to patients	1.48	1.65	1.47	**< 0.001**
Find out what relatives think and feel	1.79	1.81	1.71	**0.001**

Legend for colour coding of mean ratings:

Highest importance
Intermediate
Lowest importance

[1] Mean ratings calculated based on dichotomised variables. Lower mean rating indicates higher importance
[2] Differences significant at the 95% confidence level are shown in bold

Analysis of sample differences when statements are grouped according to themes lends further support to findings from the analysis of individual statements. Interestingly the analysis shows no differences in the importance ascribed to Medical skills and knowledge between any of the sample groups (see Tables Twelve - Fifteen). The theme of Involving patients/relatives in decision-making was rated significantly more important by people in Northern European countries than by respondents in Southern nations, and likewise people in Southern Europe rated this theme as significantly more important than did those in Eastern countries (see Table Fourteen). Relatives also rated the importance of this theme higher than patients did (see Table Thirteen), as did women compared with men (see Table Fifteen). There are also significant differences in the importance ascribed to Communication and interpersonal skills across the different groups. Women again found this to be more important than did men (see Table Fifteen), and respondents from Northern Europe saw it as more important than did their counterparts in Southern and Eastern Europe: there were no significant differences, however, in the mean ratings ascribed to this theme by people in the South and in the East of Europe (see Table Fourteen). The data also indicate, however, that there are no significant differences in how patients and relatives (Table Thirteen) and younger and older people (Table Twelve) see the importance of this theme. In fact there were no significant differences in the ways respondents of different age groups rated any of the three themes (Table Twelve).

Table Twelve: Comparison of mean ratings for themes by age group

Theme	*Groups for comparison*	*Number of respondents*	*Mean rating*[1]	*95% confidence range of observed mean rating*	*Significance*[2] *(between groups)*
Medical skills and knowledge	<= 35 years	259	1.35	1.31 - 1.39	0.334
	36 - 50	398	1.38	1.35 - 1.42	
	51 - 65	422	1.39	1.36 - 1.42	
	>65 years	286	1.40	1.36 - 1.44	
	Total	**1365**	**1.38**	**1.37 - 1.40**	
Communication and interpersonal skills	<= 35 years	259	1.63	1.59 - 1.68	0.406
	36 - 50	399	1.68	1.64 - 1.72	
	51 - 65	423	1.68	1.64 - 1.72	
	>65 years	286	1.67	1.63 - 1.72	
	Total	**1367**	**1.67**	**1.65 - 1.69**	
Involvement of patients/relatives in decision-making	<= 35 years	259	1.86	1.80 - 1.93	0.808
	36 - 50	398	1.82	1.77 - 1.87	
	51 - 65	422	1.84	1.79 - 1.88	
	>65 years	286	1.84	1.78 - 1.89	
	Total	**1365**	**1.84**	**1.81 - 1.86**	

[1] All mean ratings calculated are based on non-dichotomised variables. Lower mean rating indicates higher importance.

[2] Differences significant at the 95% confidence level are shown in bold.

Table Thirteen: Comparison of mean ratings for themes by respondent status

Theme	*Groups for comparison*	*Number of respondents*	*Mean rating*[1]	*Sig. (2-tailed).*
Medical skills and knowledge	Patient	458	1.33	.127
	Relative	890	1.39	
Communication and interpersonal skills	Patient	459	1.63	.268
	Relative	892	1.67	
Involvement of patients /relatives in decision-making	Patient	460	1.86	**.007***
	Relative	890	1.83	

[1] All mean ratings calculated based on non-dichotomised variables. Lower mean rating indicates higher importance

Table Fourteen: Comparison of mean ratings for themes by region

Theme	*Groups for comparison*	*Number of respondents*	*Mean rating*[1]	*95% confidence range of observed mean rating*	*Significance*[2] *(between groups)*
Medical skills and knowledge	North	496	1.37	1.34 - 1.40	0.216
	East	357	1.41	1.37 - 1.45	
	South	529	1.38	1.35 - 1.41	
	Total	**1382**	**1.38**	**1.37 - 1.40**	
Communication & interpersonal skills	North	496	1.62	1.59 - 1.66	**0.003**
	East	359	1.70	1.66 - 1.74	
	South	529	1.69	1.66 - 1.73	
	Total	**1384**	**1.67**	**1.65 - 1.69**	
Involvement of patients/relatives in decision-making	North	496	1.74	1.70 - 1.78	**< 0.000**
	East	357	1.98	1.92 - 2.04	
	South	530	1.84	1.79 - 1.88	
	Total	**1383**	**1.84**	**1.81 - 1.87**	

[1] All mean ratings calculated are based on non-dichotomised variables. Lower mean rating indicates higher importance.

[2] Differences significant at the 95% confidence level are shown in bold.

Table Fifteen: Comparison of mean ratings for themes by gender

Theme	*Groups for comparison*	*Number of respondents*	*Mean rating*[1]	*Sig. (2-tailed).*
Medical skills and knowledge	Male	624	1.40	.396
	Female	726	1.36	
Communication and interpersonal skills	Male	626	1.72	**.000***
	Female	727	1.62	
Involvement of patients /relatives in decision-making	Male	626	1.89	**.007***
	Female	726	1.78	

[1] All mean ratings calculated are based on non-dichotomised variables. Lower mean rating indicates higher importance.

5.4 Additional comments

Towards the end of the questionnaire respondents were asked if there was "any other important quality that a doctor in intensive care should have" and they were offered an opportunity to expand on answers given to the tick box questions. Although no new competencies were identified, respondents sometimes mentioned moral qualities which underlie some of our competency statements, such as integrity, kindness, truthfulness and compassion.

On the theme of medical skills and knowledge, respondents said such things as:

They (doctors) should have both knowledge and experience of modern diseases. They should make a right diagnosis fast and be confident and self-controlled in the way they handle themselves in front of patients and relatives – but without talking down to them! (Relative of a patient in Poland).

On communication and interpersonal skills, examples include:

He (the doctor) has to be clear in the way he informs relatives and all doctors should give the same information (Relative of a patient in Italy)

Doctors should remember that contact with relatives is very important. They could find out a lot about the patient and his or her previous illness, etc. (Relative of a patient in Poland)

On involvement of patients/relatives in decision-making one relative said:

(Doctors should be) kind, patient and open to working with patients (Relative of a patient in the Czech Republic)

The responses to this open question indicated agreement among respondents across the eight countries that the questionnaire identified the main elements of professional competence which are relevant to intensive care practice from a patient/relative perspective. Most of the respondents who answered this question used it to expand on issues that the questionnaire had already included. Some used the space to account for their own experiences which were in most cases good. Many respondents moreover expressed gratitude for the good treatment they had received from dedicated intensive care doctors and for being offered an opportunity to feedback their views.

6 Discussion

The results of this survey show that patients and relatives view medical skills and knowledge such as decisiveness in decision making, clinical knowledge, & the ability to act calmly in a crisis and to carry out practical procedures skilfully as being the most important qualities for an intensive care doctor. Good communication and interpersonal skills are next in importance, with patient or relative involvement in decision-making being accorded somewhat lesser importance. However, the fact that users of intensive care ascribe greater importance to clinical and medical competences than to competences relating to patient involvement in decisions does not mean that they are willing to let doctors make all decisions relating to their care. With the exception of "not giving information that may be upsetting", all of the competencies we asked about in this questionnaire were seen as either Essential or Very important by an overwhelming majority of respondents (ranging from 67 to 99 percent).

For all the different groups of respondents we examined the ordering of the importance of general themes was the same (with medical skills first, communication second and involvement of patients and relatives third). However, there are variations within the sample.

It might be suggested that younger people would have stronger preferences than older people for information and involvement in decisions about their care (and hence stronger preferences for doctors' competences to that effect); and that older people would have stronger preferences for an ICU doctor who takes control and shows decisiveness. Looking at responses to individual statements by age group, younger participants – those aged under 50 years – gave significantly higher ratings than the oldest respondents in the survey – aged 65 years and above – with regards to the importance of doctors giving explanations that patients could understand. This, however, was the only significant difference observed amongst the different age groups for ratings to single items or for overall theme scores. It may be that that the ICU experience influences views more than other factors, overriding any differences in values between younger and older people. Or of course it may be that our sample is too small to demonstrate any variation by age.

We also asked whether patients differed from relatives in their views about the competencies of intensive care doctors. In the analysis we found differences in patients' and relatives' ratings of certain single statements: patients gave higher importance to doctors involving patients in decisions, and giving them full information, than did relatives, whereas relatives saw the qualities of giving bad news in a caring way and treating patients as individuals as more important than did patients. Differences between patients and relatives were also approaching significance for the importance of involving relatives in decisions about care and treatment, with relatives tending to see this characteristic as more important ($p=.083$). A comparison of patients' and relatives' mean importance ratings for the overarching themes shows that relatives did overall rate the involvement of patients/relatives in decision-making as significantly more important than patients did.

Gender seemed to have more of an effect than either age or whether people were patients or relatives. We hypothesised that women might ascribe higher importance than men to competences that relate to interpersonal skills, communication and shared decision-making, and this was supported by the data. Thus women were more likely than men to see doctors giving patients the opportunity to ask questions and involving patients & relatives in decisions about care and treatment as essential. There was no significant difference between men and women on the importance of the theme of medical skills and knowledge, but, in line with the single statement results, women were significantly more likely than men to emphasise the importance of good communication and interpersonal skills and the involvement of patients and relatives in decision-making.

The most interesting variations within our sample were by region of Europe. We compared countries in the North of Europe with countries in the South and East and found that the biggest differences were between the North and the East, with the southern countries on most items falling somewhere between the other two. People in the northern countries were significantly more likely to see it as essential that doctors give patients the opportunity to ask questions, that patients are given full information and are involved in decisions, and that doctors should be decisive. Southern countries were least likely to emphasise decisiveness and practical skills and most likely to emphasise up-to-date knowledge and team-working. Respondents from the East of Europe gave high importance ratings to doctors being able to carry out practical procedures skilfully, but gave significantly lower ratings than their North and South European counterparts in relation to the importance of doctors listening to patients and involving close relatives in decisions about care and treatment. When compared on over-arching themes, there was no significant difference between the regions on the extent to which people emphasised medical skills and knowledge, but people in the northern countries were more likely than those in the east or south to emphasise communication and interpersonal skills, whilst involving patients and relatives in decision-making was seen as most important in the North of Europe, followed by the South & finally the East and with significant differences between all regions.

The design and method of distribution of this survey introduce certain limitations into the interpretation of the findings. First, the questionnaire was developed from a small number of qualitative interviews carried out in the UK, and a literature review focusing exclusively on scientific studies published in English. This could have introduced an Anglo-Saxon bias in the selection of statements on professional competence to be included in the survey. However, free text responses gave no indication that the selection was inappropriate or inadequate in any of the eight countries in which the survey was carried out. This suggests that what users of intensive care see as important qualities for a doctor is quite universal, and although elements of professional competency may be given different emphasis and weight in different cultural and social contexts there is nonetheless widespread consensus on what those elements are.

It is also a limitation of this study that we have little knowledge of the role played by patients' and relatives' prior experience of intensive care in the rating of medical competency. When the statement Doctors in intensive care should inform patients about the care they will need in the future is rated Essential, for example, is the response influenced by a previous good or poor health care experience? Different experiences may affect responses, but without careful interviewing we do not know how big an impact this has on our results.

Because of resource constraints the survey was distributed through a dedicated network of local representatives with an interest in patient experiences and expectations of intensive care. Although this means of distribution worked well in most cases, some local contacts were unable to be as actively involved as others, which could have contributed to a weaker response from some countries. As a result responses from certain countries turned out to be heavily overrepresented in the sample. Since we know that priorities to some extent vary across national borders, results based on the entire sample (such as the overall rating of importance) must be interpreted very cautiously, and with national differences in response in mind. A stronger response from the countries in Northern Europe may have changed the overall importance ratings of statements so that patient information and information giving would have featured higher on the list of priorities.

Finally, as there has been so little research on patients' and relatives' perceptions focusing specifically on intensive care doctors, we still need to understand more fully, through both qualitative and quantitative research, the complexity of this topic and the kinds of experience which affect people's views.

7 Conclusion

The CoBaTrICE survey of patient and relatives in intensive care was carried out to obtain user views about the knowledge, skills and attitudes that doctors in intensive care need in order to provide high-quality, patient-centred care. We also wanted to assess differences in users' preferences and expectations.

This survey points to some variation in views on what makes a good intensive care doctor. Differences are detectable between men and women and across regions in Europe. Our findings lend support to a broad conclusion that patients and relatives in intensive care expect doctors to have a wide range of competencies. Training programmes for doctors in intensive care in all areas of Europe must reflect this range, including the ability to involve patients and share decisions.

8 Appendix A – Mean ratings by region

Mean ratings for selected single statements by region

Competency	*Groups for comparison*	*Number of respondents*	*Mean rating*[1]	*95% confidence range of observed mean rating*	*Significance*[2] *(between groups)*
Give patients opportunity to ask questions	North	494	1.55	1.51 - 1.59	< 0.000
	East	352	1.68	1.63 - 1.73	
	South	516	1.65	1.61 - 1.69	
	Total	**1362**	**1.62**	**1.60 - 1.65**	
Give relatives opportunity to ask questions	North	491	1.55	1.51 - 1.59	0.053
	East	349	1.63	1.58 - 1.68	
	South	516	1.59	1.55 - 1.63	
	Total	**1356**	**1.59**	**1.56 - 1.61**	
Give patients full information even when it might upset them	North	486	1.68	1.64 - 1.72	< 0.000
	East	349	1.79	1.75 - 1.83	
	South	517	1.77	1.74 - 1.81	
	Total	**1352**	**1.74**	**1.72 - 1.77**	
Involve patients in decisions about care and treatment	North	493	1.69	1.65 - 1.73	0.001
	East	348	1.79	1.75 - 1.83	
	South	517	1.76	1.73 - 1.80	
	Total	**1358**	**1.74**	**1.72 - 1.77**	
Involve close relatives in decisions about care and treatment	North	494	1.69	1.65 - 1.73	0.001
	East	348	1.80	1.76 - 1.84	
	South	522	1.70	1.66 - 1.74	
	Total	**1364**	**1.72**	**1.70 - 1.75**	
Listen to patients	North	493	1.48	1.43 - 1.52	< 0.000
	East	353	1.65	1.60 - 1.70	
	South	521	1.47	1.43 - 1.51	
	Total	**1367**	**1.52**	**1.49 - 1.54**	
Be decisive when action is needed	North	491	1.21	1.17 - 1.24	< 0.000
	East	351	1.25	1.21 - 1.30	
	South	521	1.32	1.28 - 1.36	
	Total	**1363**	**1.26**	**1.24 - 1.29**	
Have up-to-date knowledge about illness and how to treat it	North	489	1.31	1.27 - 1.35	0.450
	East	351	1.33	1.28 - 1.38	
	South	523	1.29	1.25 - 1.33	
	Total	**1363**	**1.31**	**1.28 - 1.33**	

Carry out practical procedures on patients skilfully	North	488	1.36	1.32 - 1.40	**0.023**
	East	349	1.36	1.30 - 1.41	
	South	516	1.43	1.39 - 1.48	
	Total	**1353**	**1.39**	**1.36 - 1.41**	
Work well as member of a team	North	494	1.43	1.39 - 1.47	**< 0.000**
	East	352	1.54	1.49 - 1.59	
	South	522	1.32	1.28 - 1.36	
	Total	**1368**	**1.42**	**1.39 - 1.44**	
Treat patients as individuals	North	487	1.41	1.36 1.45	**< 0.000**
	East	350	1.52	1.47 1.58	
	South	512	1.33	1.29 1.37	
	Total	**1349**	**1.41**	**1.38 1.43**	
Explain in ways patients can understand	North	493	1.41	1.36 1.45	**< 0.000**
	East	352	1.52	1.47 1.57	
	South	522	1.32	1.28 1.36	
	Total	**1367**	**1.40**	**1.38 1.43**	

[1] Mean ratings calculated based on dichotomised variables. Lower mean rating indicates higher importance.

[2] Differences significant at the 95% confidence level are shown in bold.

9 Appendix B – Mean ratings by age group

Mean ratings for selected single statements by age group

Competency	*Groups for comparison*	*Number of respondents*	*Mean rating*[1]	*95% confidence range of observed mean rating*	*Significance*[2] *(between groups)*
Give pts opportunity to ask questions	<= 35 years	258	1.60	1.54 - 1.66	0.370
	36 - 50	391	1.64	1.59 - 1.69	
	51 - 65	416	1.60	1.55 - 1.65	
	>65 years	281	1.65	1.60 - 1.71	
	Total	**1346**	**1.62**	**1.60 - 1.65**	
Give relatives opportunity to ask questions	<= 35 years	259	1.56	1.50 - 1.62	0.420
	36 - 50	388	1.62	1.57 - 1.66	
	51 - 65	415	1.59	1.55 - 1.64	
	>65 years	278	1.57	1.51 - 1.63	
	Total	**1340**	**1.59**	**1.56 - 1.61**	
Give pts full information even when upsetting	<= 35 years	258	1.71	1.65 - 1.77	0.313
	36 - 50	387	1.77	1.73 - 1.81	
	51 - 65	412	1.73	1.69 - 1.78	
	>65 years	278	1.75	1.70 - 1.80	
	Total	**1335**	**1.74**	**1.72 - 1.77**	
Involve patients in decisions about care and treatment	<= 35 years	258	1.75	1.69 - 1.80	0.442
	36 - 50	390	1.77	1.73 - 1.81	
	51 - 65	413	1.72	1.68 - 1.76	
	>65 years	281	1.73	1.68 - 1.78	
	Total	**1342**	**1.74**	**1.72 - 1.77**	
Involve relatives in decisions about care and treatment	<= 35 years	259	1.72	1.66 - 1.77	0.957
	36 - 50	393	1.72	1.68 - 1.76	
	51 - 65	414	1.73	1.69 - 1.78	
	>65 years	282	1.72	1.67 - 1.77	
	Total	**1348**	**1.72**	**1.70 - 1.75**	
Listen to patients	<= 35 years	259	1.50	1.44 - 1.56	0.456
	36 - 50	394	1.50	1.45 - 1.55	
	51 - 65	417	1.52	1.47 - 1.57	
	>65 years	282	1.56	1.50 - 1.62	
	Total	**1352**	**1.52**	**1.49 - 1.54**	

Competency	Groups for comparison	Number of respondents	Mean rating[1]	95% confidence range of observed mean rating	Significance[2] (between groups)
Be decisive when action is needed	<= 35 years	257	1.23	1.18 - 1.28	0.490
	36 - 50	393	1.26	1.22 - 1.31	
	51 - 65	416	1.28	1.24 - 1.33	
	>65 years	282	1.26	1.21 - 1.31	
	Total	**1348**	**1.26**	**1.24 - 1.29**	
Up-to-date knowledge about illness and treatment	<= 35 years	258	1.27	1.22 - 1.33	0.320
	36 - 50	392	1.30	1.25 - 1.34	
	51 - 65	416	1.31	1.27 - 1.35	
	>65 years	282	1.34	1.29 - 1.40	
	Total	**1348**	**1.31**	**1.28 - 1.33**	
Carry out practical procedures skilfully	<= 35 years	257	1.34	1.28 - 1.40	0.243
	36 - 50	391	1.41	1.37 - 1.46	
	51 - 65	410	1.38	1.33 - 1.43	
	>65 years	281	1.40	1.34 - 1.46	
	Total	**1339**	**1.39**	**1.36 - 1.41**	
Work well as member of a team	<= 35 years	259	1.39	1.33 - 1.45	0.323
	36 - 50	393	1.41	1.37 - 1.46	
	51 - 65	419	1.41	1.36 - 1.45	
	>65 years	282	1.46	1.40 - 1.52	
	Total	**1353**	**1.42**	**1.39 - 1.44**	
Treat patients as individuals	<= 35 years	257	1.40	1.34 1.46	0.397
	36 - 50	392	1.38	1.33 1.43	
	51 - 65	410	1.43	1.39 1.48	
	>65 years	276	1.43	1.37 1.49	
	Total	**1335**	**1.41**	**1.38 1.44**	
Explain in ways patients can understand	<= 35 years	257	1.34	1.28 1.40	**0.002**
	36 - 50	394	1.37	1.32 1.42	
	51 - 65	420	1.42	1.37 1.47	
	>65 years	280	1.49	1.43 1.54	
	Total	**1351**	**1.40**	**1.38 1.43**	

[1] Mean ratings calculated based on dichotomised variables. Lower mean rating indicates higher importance.

[2] Differences significant at the 95% confidence level are shown in bold.

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