Indian Journal of Clinical Anaesthesia 2022;9(2):254–262

Content available at: https://www.ipinnovative.com/open-access-journals

Indian Journal of Clinical Anaesthesia

Journal homepage: www.ijca.in

Original Research Article

Considering simulation training to ensure patient safety for expert anesthesiologists over the age of 60 in Saudi Arabia

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ARTICLE INFO

Article history:
Received 28-01-2022
Accepted 07-02-2022
Available online 22-04-2022

Keywords:
Simulation training
Elderly anesthesiologists
Saudi Arabia

ABSTRACT

Background: Assessing older anesthesiologists' attitudes and knowledge regarding simulation training as part of their reemployment process in Riyadh, Saudi Arabia. To assess their perception and understanding of how they think about simulation training during the recontracting process to ensure safe practice and patient safety.

The research team conducted a nonrandomized study with elderly anesthesiologists in five health facilities in Riyadh, Saudi Arabia, from June 2018 to February 2019. We created a written format for a self-administered questionnaire; seventy responses were obtained from these anesthesiologists by using this survey.

Results: 77.14% of aged anesthesiologists performed clinical work and were on call for twenty-four hours. The process of reemployment varied. However, 37% of the anesthesiologists received the opportunity for reemployment through a recommendation from the department head. In addition, 79% of anesthesiologists felt that simulation should be introduced in either medical education or continuing education to identify and mitigate age-related problems.

Conclusion: Elderly anesthesiologists in Riyadh, Saudi Arabia, are still fully involved in patient care and their duties, and they believe that simulation helps identify and mitigate age-related issues when it comes to their practice as medical professionals. Therefore, we believe it is time to reevaluate the reemployment process and consider simulation as an objective assessment tool to uncover incompetence, optimize skills, and help anesthesiologists plan for their future clinical careers. Further studies are also needed to cover all regions in the kingdom Saudi Arabia.

1. Introduction

The world of healthcare faces many obstacles in improving the medical workforce and ensuring that healthcare professionals use appropriate skills to ensure patient safety. All health professionals are expected to provide quality health care regardless of their specialization. However, there are medical professionals work beyond the retirement age set by their country. One of the main reasons for this phenomenon has been the pressure of staff shortages in their specialties. The employment of older physicians is a major challenge, and a common resulting problem is a negative impact on patient safety.[1,2] A solution is needed to alleviate this problem.

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https://doi.org/10.18231/j.ijca.2022.049

1.1. The aging world population

According to a 2015 report by the World Health Organization (WHO), the number of people in the world 60 years and older will increase from 10% to 20%, and this number will double by 2050.[3] The aging of the world's population is increasing,[4] and high-income countries are more likely to experience deaths in people older than 70 years.[3,5] In Saudi Arabia, for example, the proportion of elderly people in the total population will be 18.4% in 2050.[6]

1.2. The impact of aging on the health workforce

Saudi Arabia has a shortage of anesthesiologists, and due to increasing demand, those who are of retirement age are being asked to renew their contracts. However, it is well known that the clinical skills of older physicians decline with age, especially when combined with lower case volume.[7,8] Therefore, it is critical to ensure that these physicians are able to care for their patients, as they are in the age-related risk group of diminished psychological and physiological abilities, which can impact clinical practice.[4] Additionally, the cognitive abilities of these health care workers also decrease with age.[9–11] Many older anesthesiologists continue to practice clinical work, and there are many factors that influence them to continue working beyond the recommended retirement age.[4] For example, financial need, professional satisfaction, the need for health insurance, and even meeting staffing shortages are cited as reasons for older anesthesiologists to continue working.[7,8,12] Anesthesiology is one of 21 medical specialties expected to experience a shortage of physicians,[4,12,13] and this shortage is particularly pronounced in developing countries.[14] Because of this shortage, developed countries such as Canada and the United States continue to recruit anesthesiologists for clinical work over 65 years of age.[7] In Australia, the total number of physicians over 65 years of age has increased by 80% since 2004, and in 2014, 9.9% of the total medical workforce was 65 years or older.[15] In Saudi Arabia, the system of contract renewal is allowed for certain specialists up to the age of 70 years, but this practice is regulated by rules and regulations of the Ministry of Health and reinforced by the Saudi Commission for Health Specialties (SCFHS).[16] Due to the shortage of anesthesiologists, it is most logical to help older and experienced physicians remain in practice as long as they can demonstrate clinical competence while maintaining accepted levels of patient safety.[7] One of the most important ways to address the problem of age and patient safety is through the use of simulation training in medicine. Simulation training in medicine, particularly for crisis resource management, has been shown to be effective in training and assessing the competence of anesthesiologists.[17] Canada, in particular, has adopted this practice as one of the main strategies for assessing an aging anesthesiologist workforce.[18] We believe that the use of simulation training as a tool for competency assessment needs to be a widespread approach in Saudi Arabia in the future. Currently, at Saudi Arabia, SCFHS regulations are the benchmark for qualification and accreditation of healthcare practitioners,[16] and SCFHS has recently introduced the use of simulation as an assessment tool in postgraduate medical education (CME)[19] and we believe it will also be an essential part of the reemployment process for aged physicians.

2. Materials and Methods

Permission to conduct this study was obtained from the Research Ethics Committee of the Ministry of Health in Riyadh, KSA (King Fahad Medical City). The IRB protocol number: 18-279E, and the category of approval is exempt. The purpose of this study was communicated to all participants in writing prior to the interview, and full informed consent was obtained before the interview was conducted.

2.1. Study design

We conducted a prospective, non-randomized, observational study. The sample was collected from five health facilities in Riyadh, KSA.

2.2. Study setting

The data were collected from different hospitals, the level of care of these facilities varied in the following levels: peripheral, secondary and tertiary. The hospitals included in this study belong to both the public and private sectors in the Riyadh region, which consists of 20 governorates or sub-districts.

2.3. Sample size planning

We determined the sample size online using the sample size calculator on a relevant website (Creative Research Systems, 2016).[5] We drew the sample after defining the confidence interval which is 16.06 for our population based on the population of anesthesiologists in Riyadh.[19] For the confidence level 95%, we then calculated the sample size which was 70 participants. Our sample is homogeneous.

2.4. Subjects

Subjects were recruited from the anesthesia departments of four hospitals of the Ministry of Health including King Fahad Medical City, King Khalid Hospital in Al Kharj, and Al Muzahimiyah General Hospital. Also, from three hospitals that are not part of the Ministry of Health: King Abdulaziz Medical City, Prince Sultan Medical Military

City, and King Faisal & Research Center Hospital. All facilities in the sample were located in Riyadh region. Data were collected over a period of eight months, from June 2018 to February 2019. We distributed the informed consent form and free printed questionnaire to the participants. The inclusion criteria for the questionnaire were as follows: Participants aged 60 to 69 years.

2.5. Study instruments

The research team developed a self-administered questionnaire (described in this subsection). The development of the questionnaire involved many steps, which are described in detail below.

Stage 1: Item development. Identification of domain(s) and item generation.[20]

The purpose of the questionnaire is to capture the demographics of the aged anesthesiologists, their work activities, reasons for continuing to work, the reemployment process in Saudi Arabia, and their willingness to participate in the simulation courses to maintain patient safety. The original 30 questions were reduced to 26 questions after the pilot study because there were either some overlapping questions that had the same meaning and/or did not provide useful information for the study.

The 26 questions were grouped into three, namely - sociodemographic, anesthesia practices, and knowledge of simulation and patient safety - represented by 1-8, 9-16, and 17-26 multiple-choice questions, respectively. Each question had three or four possible answers.

The instrument developed had not been previously tested; therefore, it was critically reviewed for clarity and meaning and pilot tested and revised. All questions were empirically formulated based on expert opinion. In addition, the research team reviewed other relevant questionnaire designs until subsequently determining that they should be tested with a sample group. The final version was modified based on the testing and feedback.

The validity of the questionnaire was assessed using four items:

1. Face validity: the research team first ensured that participants understood the questions and that the questions were relevant to our objectives.
2. Preparation of pilot data: Data were cleaned and reviewed for quality assurance. We also explored the possibility of predicting missing data. We then developed the pretesting questions and validated a questionnaire to assess the aged anesthesiologists and their readiness for simulation skills and maintaining patient safety. After item development and expert assessment, we conducted cognitive interviews with ten participants to refine and evaluate item interpretation and finalize the instrument.
3. Content validation: we reasoned that all questions covered the full range of topics to be measured and also supported the aim of the study. We then tested content validity. The items of the instrument were adequately measured by the Delphi method with five expert judges. We used the Delphi method to obtain feedback from experts in anesthesia, simulation training, patient safety, and policy implementation in two rounds. Each of the two rounds was punctuated by focus group discussions with our target sample. In each round, the questionnaires became increasingly closed-ended until consensus was reached on the definition of the domain we were studying and the possible items we could use. We also tested reliability. The questionnaire was administered once and then repeated under the same conditions to ensure that responses were consistent. The instrument used was face and content validity derived from the self-administered questionnaire.
4. Content reliability: we collected the same information more than once with the same questionnaire and obtained similar results under the same conditions. Then we defined what was to be measured. We then prepared the data to be analyzed using Cohen's Kappa Index to determine the face validity of the instrument. We began the analysis to check items for deletion or modification, ensuring that only internally consistent items were ultimately included.

2.6. Statistical analysis

Before analyzing the data, we excluded the data of four participants from the analysis on the basis that their surveys were incomplete. The final collected sample comprised 70 participants. The response rate was 100%.

The proportion of respondents by health institution was as follows: 34.29% from Health Affairs Hospitals in the Riyadh region, 22.86% from King Faisal Hospital & RC Riyadh, 2.86% from National Guard Hospitals Riyadh, 31.43% from Prince Sultan Medical Military City, and 8.57% King Fahad Medical City.

The sample consisted of Saudi and non-Saudi individuals: 68 males and two females. All study variables were summarized using descriptive statistics. Quantitative variables such as age, gender, and education level were reported in terms of their number and percentage [Table 1].

All categorical and interval variables were compared statistically across the study by using the chi-square test and T-test, respectively. The bivariate analysis was performed to test the association between questions and the independent variables (Pearson correlations). We used a correlation test analysis to describe the sample and assess the association of potential predictor variables with our factor effect in simulation training, and to explore multivariable associations. A series of preliminary analyses were conducted. All analyses were executed in Stata/IC 16

(64-bit). We used a significance level of 0.05 throughout.

3. Result

We examined the current process of re-contracting anesthesiologists over the age of 60 in the Riyadh region Saudi Arabia, along with their demographics, work assignments, and willingness to participate in simulation courses while ensuring patient safety.

3.1. Demographic characteristics

The majority of the anesthesiologists interviewed, aged 60-69 years, were male, non-Saudi, married, and specialists in their field. The mean age distribution for the sample was as follows: 68.57% were aged 60-64 years; 31.43% were aged 65-69 years, and 77.14% held a Board of Anesthesiology qualification. In addition, 17.14% were medical specialists, 2.86% were female, and 2.86% were Saudi anesthesiologists. All participants earned more than the maximum monthly income - 3473 USD per month[21] (Table 1) Perception of safe anesthesia practice.

The questionnaire included questions about the type of practice, number of assignments per month, reason for retirement, reasons to continue working after age 60, requirements for a new contract, involvement in claims, and volume of cases per year (Table 2).

The results showed that 77.14% of anesthesiologists performed clinical work and 22.8% performed some administrative activities in addition to their clinical work. The vast majority of them (91.42%) continued to have a 24-hour on-call schedule.

Regarding the average number of 24-hour on-call time per month, more than half (60%) reported being on-call 1-2 times per month, and about 22.85% reported being on-call 3-4 times, while only 17.14% reported being on-call more than four times per month.

The results indicated several reasons for withdrawal. The most common reasons were wanting time to relax (48.57%) and new rules and regulations (28.57%). About one-fifth of the participants cited family and health reasons as reasons for retirement. In addition, the percentage of anesthesiologists who wanted to continue working after age 60 due to satisfaction with their work environment was 68.5%.

We also found that the re-contracting process in their health facility was conducted by the department head based on recommendations (37.14%), health examination (28.57%) and competency-based assessment (5.7%). In addition, the study showed that 97% of anesthesiologists did not file claims in the last three years. Regarding case volume per year, the results showed that 60% had a case load of more than 300 cases per year (Table 2).

Table 1: Summarizes the results of demographic data of study participants

Age	**Freq**	**Percent**
60–64 years old	48	68.57
65–69 years old	22	31.43
Sex	**Freq**	**Percent**
Female	2	2.86
Male	68	97.14
Nationality	**Freq**	**Percent**
Saudi	2	2.86
Non-Saudi	68	97.14
Level of Education	**Freq**	**Percent**
Board of Anesthesia	54	77.14
Master of Anesthesia	8	11.43
Other	8	11.43
Marital status	**Freq**	**Percent**
Married	68	97.14
Single	0	0
Widowed	2	2.86
If you are Married # children	**Freq**	**Percent**
2 children	12	17.14
3 children	22	31.43
4 children	6	8.57
5 children	14	20.00
Missing	16	22.86
Income level	**Freq**	**Percent**
Less than minimal monthly income 3473 USD	0	0
Over the maximal monthly income 3473 USD	70	100
Name of the institution	**Freq**	**Percent**
Riyadh Ministry Health Affairs Hos (Al Yamamah Hospital, King Khalid Hospital in Al Kharj, and Al Muzahimiyah General Hospital.)	24	34.29
King Faisal Hospital &RC Riyadh	16	22.86
National Guard Hospitals Riyadh (King Abdulaziz Medical City)	2	2.86
Prince Sultan Medical Military City	22	31.43
King Fahad Medical City.	6	8.57
Professional registration Qualification in SCFHS	**Freq**	**Percent**
Consultant	58	82.86
Specialist	12	17.14

Table 2: Summarizes the results of the work and the respondents job description

Nature of work	**Freq**	**Percent**
Clinical	54	77.14
Non-clinical	0	0
Both (Clinical - Non-clinical)	16	22.86
On call for 24 hours	**Freq**	**Percent**
Yes	64	91.42
No	6	8.57
Times on call for 24 hours per month	**Freq**	**Percent**
1–2 times	42	60.00%
3–4 times	16	22.85%
More than 4 times	12	17.14%
Reason for retirement	**Freq**	**Percent**
Health reasons	6	8.57%
Family issues	10	14.29%
New rules and regulations	20	28.57%
Time to relax	34	48.57%
Causes to continue to work after age 60 years	**Freq**	**Percent**
Financial reasons	18	25.71
Satisfaction with work	48	68.57
Satisfaction with work Health insurance	2	2.86
Shortage in the work	2	2.86
Process of recontracting in health institutions	**Freq**	**Percent**
Health examination	20	28.57
Hospital Competency assessment process	4	5.71
Head of the department recommendation	26	37.14
Need for SCFHS approval	8	11.43
Need for hospital general director approval	12	17.14
Claim in the last 3 years	**Freq**	**Percent**
Yes	2	2.86
No	68	97.14
Volume of cases per year you can manage	**Freq**	**Percent**
less than 200	4	5.71
201-300	24	34.28
More than 300	42	60

3.2. Knowledge about simulation and patient safety

This part of the questionnaire focused on knowledge about simulation training, the effect of aging on patient safety, the effect of simulation on participants' skills and on patient safety, preferred age for participation in a simulation program, and other items (Table 3).

We found that two-thirds of the participants (68.57%) had no knowledge of the simulation process for crisis management. In addition, more than 31% did not believe aging would cause psychophysiological deterioration, and 54% were uncertain at best about its effects.

Table 3: Summarizes the results of knowledge of simulation and patient safety

Do you know a simulation course can be used as crisis resources management (CRM)
Yes
No
Have you a taken a simulation course before
Yes
No
Do you know the simulation could help you to improve patient safety because it is will increase your familiarity with new technologies
Yes
Maybe
No
Do you know Psychophysiological decline caused by aging could compromise your work performance?
Yes
Maybe
No
Do you know Simulation could be a useful tool to detect and mitigate the psychophysiological alteration caused by aging
Yes
Maybe
No
Do you agree the simulation should be introduced in the continuous medical education program of anesthesiologists to detect and mitigate the psychophysiological alteration caused by aging
Yes
Maybe
No
Do you know aging has hindered or could hinder technical and/or non-technical skills
Yes
Maybe
No

Regarding the introduction of simulation training in continuing medical education (CME) to identify and mitigate psychophysiological problems caused by aging, the vast majority (79%) believed it should be introduced, and one-fifth (20%) stated that simulation training was unnecessary.

Regarding participants' preferred age for starting a simulation program, the majority (37%) favored starting at the beginning of anesthesia practice, while 31% and 20% preferred starting at age 60 and 65, respectively.

Moreover, about three-fourth (71.43%) felt that their technical and/or non-technical skills were not affected by aging while one-fourth (25.71%) felt that they might be affected. Half of the participants were confident that simulation could help improve patient safety and skills by increasing their familiarity with new technologies, while the other half remained unsure.

Table 4:

Do you think the simulation is important course	**Freq**	**Percent**
Strongly agree	36	51.43
Undecided	14	20
Strongly disagree	20	28.57
Are you agree to add simulation training as a requirement to the re-contract process	**Freq**	**Percent**
Yes	38	54.28%
Maybe	10	14.28%
No	22	31.42%
Do you agree simulation could use as standard requirement to ensure patients safety	**Freq**	**Percent**
Strongly agree	38	54.28
Undecided	6	8.57
Disagree	6	8.57
Strongly disagree	20	28.57
What is the appropriate age you think is required to start the simulation?	**Freq**	**Percent**
55 years	8	11.43
60 years	22	31.43
65 years	14	20
right from the beginning of the anesthesia practice	26	37.14
Do you like to attend a high-fidelity simulation?	**Freq**	**Percent**
YES	44	62.86
Maybe	22	31.43
No	4	5.71
What are barriers that prevent you from participating in simulation-based training	**Freq**	**Percent**
Shortage of anesthetists	26	37.14
Impossible to have non-clinical time	24	34.29
Stressful	2	2.86
The Simulation center is outside the hospital	12	17.14
Others	6	8.57
How many times you think need to participate in a high-fidelity simulation session to maintain a high level of patient care	**Freq**	**Percent**
it depends on the clinician's age	10	14.29
every 6 months	14	20
every 12 months	24	34.29
every 2 years	14	20
every 3 years	8	11.43

In terms of frequency of attendance at high-fidelity simulation sessions to maintain high levels of patient care, a good proportion (34.3%) preferred attending such courses once a year, 20% thought it could be more effective to attend twice a year, and the other 20% believed it would be optimal to attend every six months.

We also found that the vast majority (62.86%) would like to attend high-fidelity simulation courses, 31.43% said they might attend, and 5% did not want to attend. The main barriers to non-participation in simulation courses were lack of anesthesiologists, not having time, and the location of the simulation center outside the hospital at 37%, 34%, and 17%, respectively.

There was a statistically significant positive correlation between age and type of work, the process of re-contracting at a healthcare facility, volume of cases per year, and how often a clinician should attend a high-fidelity simulation session. In contrast, there was a negative correlation between their age and the other variables.

There was a positive correlation between nationality and involvement in the lawsuit only for the last three years, while the other variables had no correlation. We also found a statistically significant positive correlation, between the level of education and the barriers that prevented the anesthesiologist from participating in simulation-based training. In addition, there was a positive correlation between marital status and the barriers that prevented the anesthesiologist from participating in simulation-based training.

Finally, there is a positive correlation between professional licensure qualification in the SCFHS variable and other variables-such as anesthesiologists being on call 24 hours beyond age 60, reason for retirement, volume of cases per year, use of simulation for crisis resource management (CRM), high-fidelity simulation to improve patient safety and their skills by increasing their familiarity with new technologies, and their opinion regarding barriers that discourage anesthesiologists from participating in simulation-based training.

4. Discussion

In this study, we investigated the reasons that drive anesthesiologists in Riyadh, KSA to continue working after the age of 60, as well as their demographics, work responsibilities, and willingness to participate in simulation training courses to improve their performance, especially among anesthesiologists who have a low case volume.

Most of our aged anesthesiologists were non-Saudi men, indicating a shortage of anesthesiologists worldwide and at Saudi Arabia,[14,22] and this could also be the preference of women to retire early, like other non-Saudi anesthesiologists.[23]

The majority of participants performed full clinical work with one to two 24-hour on-call shifts; however, they may want to continue working after age 60 for the same reasons as other workers[24] or other anesthesiologists not found at Saudi Arabia.

A group of older anesthesiologists (17%) perform 24-hour on-call duties more than four times per month, which may increase concerns about retiring.[12,23] Nevertheless, all of them indicated that they would prefer to retire because they would like to have the time to relax or because of the new rules and regulations in medicine. This finding mirrors that of some older anesthesiologists in the United States.[12] The next and less common reason to continue working is financial motivation, followed by health insurance and staff shortage. The majority cite satisfaction with the work environment, as negative organizational attitudes toward older workers may encourage retirement.[23,25] The majority indicates satisfaction with the work environment, which may be due to high salaries and low monthly on-call hours. This may also indicate that the health sector cares about them as employees, as a negative attitude of an organization towards older workers is more likely to lead to early retirement.[23,25]

However, in one country, a policy of no night on-call shifts at age 60 was considered to avoid the risk of complications.[4,19] The system for re-contracting in Saudi Arabia with anesthesiologists over the age of 60 mainly involves recommendations from department heads and health examinations, but about 5% of our group from one institution also indicated a competency assessment by their institution before re-contracting. Meanwhile, competency assessment programs using simulation-based training have been developed in health care facilities in developed countries.[18]

Evidence suggests that aging is associated with an increase in litigation,[1,2,4] particularly in low-stress settings,[4,8] and in our sample, albeit a small one, there was a 2.86% involvement in these lawsuits over the past three years.

Most of our senior anesthesiologists in Saudi Arabia believe in implementing simulation courses in CME, starting from the beginning of anesthesia practice, as it has been shown to be a beneficial component of postgraduate training in anesthesia.[19] This also supports the implementation of simulation training to identify and mitigate age-related incompetence.[9,10,18,19] In addition, they aim to begin simulation courses annually at age 60, which specifically meets guidelines approved in one Canadian hospital.[18]

Regarding evidence of crisis management simulation skills among older anesthesiologists, we found that more than 60% of our sample had no knowledge of and had never participated in crisis management simulations, although they have been shown to be effective for training and assessing competence.[2,15,17,26] In addition, simulation training has been adopted in Canada as one of the strategies for assessing an aging workforce of anesthesiologists.[18] This is partly because simulation would help them learn new technologies, as mastering new technologies becomes difficult for aging anesthesiologists.[23]

In this study, more than 70% of aged anesthesiologists did not believe that aging affects their clinical or nonclinical skills, which have been shown to decline with aging, especially with regard to cognitive function. However, clinical experience, prior knowledge, and a high level of expertise can offset this effect.[9,10] There were also barriers that prevented some from participating in simulation courses, namely lack of staff and no free non-clinical time.

5. Limitations

Our target sample size was 70 participants. We faced many obstacles in recruiting our participants. The only available source to communicate with our target population and gain access to aged anesthesiologists was the SCFHS registration database and the head of the anesthesia department in the nominated hospitals.

The barriers can be summarized as follows: the registration data had not been updated; some department heads refused to participate in the study; some participants did not respond to our emails or phone calls; some anesthesiologists refused to give their age; and some anesthesiologists thought that the research project would affect their career.

We believe that including more details about the competency assessment mentioned by 5% from one of the hospitals and adding the type and complexity of cases to their work activities would contribute positively to our research.

5.1. Strengths

There were many strengths in this study. First, the use of the comprehensive instrument and the instruments tested for the first time was critical in assessing the skills of the experienced aged anesthesiologists. In addition, the actual representativeness of the sample is high because we properly studied a limited and low-proportion sample size of 60- to 69-year-olds.

6. Conclusion

It is clear that there are a significant number of aging anesthesiologists supporting the health care system in Riyadh. Furthermore, due to the global shortage of anesthesiologists, there is a need to promote the need for them to practice beyond 60 years of age or even beyond 65 years of age.

However, it is well-known that the clinical skills of older physicians decline with age, especially when exposed to lower volume; therefore, their level of clinical competence needs to be monitored and regularly updated to meet a high level of safe and satisfactory patient care.

High fidelity simulation should be introduced in the CME program of anesthesiologists and would be a useful tool to identify and mitigate the psychophysiological change caused by aging in practice, for which there was a positive correlation that was statistically significant. Simulation is one of the best tools for training and assessment, and we recommend that the SCFHS board encourage the widespread use of simulation courses for objective regular training and assessment for anesthesiologists over 60 years of age who still hope to continue clinical practice in Saudi Arabia.

In addition, we recommend that simulation training be included as a mandatory element in the process of re-contracting in health care facilities for the older physicians.

7. List of Abbreviations

KSA: Kingdom of Saudi Arabia; SCFHS: Saudi Commission for Health Specialties; CME: Continuing Medical Education; IRB number: Institutional Review Board number

8. Author's Contribution

Dr. Saleha H Jabali: Conceptualization, data curation and preparation of original draft, review and editing. Dr. Osama R Shaalan: investigation, methodology. Maha M ALOsaimi: validation, data curation, supervision, review and editing. Dr. Mohamed A Daabiss: Conceptualization, writing, reviewing and editing. All authors read and approved the final version of the manuscript.

9. Source of Funding

None.

10. Conflict of Interest

The authors declare no conflict of interest.

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Cite this article: Jabali SH, Shaalan OR, Alosaimi MM, Daabiss MA. Considering simulation training to ensure patient safety for expert anesthesiologists over the age of 60 in Saudi Arabia. *Indian J Clin Anaesth* 2022;9(2):254-262.