Evaluating the effectiveness of cardiac arrest resuscitation short course (CARS) for rural physicians of Asia: The Rural Emergency Care Training for Physicians (RECTIFY) project

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ABSTRACT

Background: Physicians from resource-constrained rural areas being lone lifesavers pose a unique challenge in resuscitating emergencies like cardiac arrest. Rural Emergency Care Training for Physicians (RECTIFY) was devised as a short course training to equip them to deal with occasional emergencies using minimal gadgets. This study was conceived to assess the effectiveness of the RECTIFY-Cardiac Arrest Resuscitation Short course (CARS) module in improving current knowledge and practice of cardiopulmonary resuscitation (CPR) among interested rural physicians of Asia. **Methods:** A three-tier observational study was conducted to assess current CPR knowledge with a pretested structured questionnaire and skills using a checklist, followed by a 3-h hands-on training and posttest evaluation using the same study instruments. Data were entered into Microsoft Excel and analyzed using SPSS 13.0. **Results:** Out of 622 participants, most of the participants (603; 96.9%) were willing to provide CPR despite poor knowledge and skills. Pretest scores averaged 1.5 ± 0.99 and 0.1 ± 0.3 for CPR knowledge and skills, respectively. Posttest scores for CPR knowledge (10.5 ± 1.5) and skills (2.8 ± 1.6) improved significantly (both $P = 0.001$). Whereas a majority improved upon chest compression skills, appropriate use of sophisticated gadgets like automated external defibrillators (AED) was low (2.4%) despite training. **Conclusion:** The level of knowledge and skill among participants was poor despite the enthusiasm and positive intent. The impact of RECTIFY-CARS on knowledge and skills among participant physicians was significant and is recommended for implementation by health policymakers in resource-poor rural settings. However, essential gadgets like AED were not impactful which necessitates the use of simpler rural alternatives.

Keywords: Cardiac Arrest, CARS, CPR, knowledge, practice, RECTIFY, rural

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Introduction

The outcome of victims in medical emergencies that culminate in cardiac arrest depends on the quality of immediate resuscitation delivered at the primary point of care. Many Asian studies have reported that emergency care at prehospital levels and all tiers of healthcare is below par.[1,2] In many parts of Asia, physicians managing emergencies in rural and resource-constrained areas are the lone lifesavers, and resuscitating patients in conditions like a cardiac arrest is a unique challenge.

There are ample studies that assessed the knowledge of cardiopulmonary resuscitation (CPR) among physicians, interns, nurses, paramedics, students, and laypeople across Asian countries revealing low knowledge levels.[1,3-6] There are various training programs in CPR for healthcare providers by the American Heart Association (AHA) and European Resuscitation Council (ERC) existing as of now, however, most of them are exhaustive and associated with skill decay necessitating frequent updation.[7,8] Urban-centrism, practical inapplicability, and need for adaptation of standardized CPR guidelines by AHA and ERC in settings without rapid ambulance response times or dispatch services were pointed out in earlier studies.[9] Hence, more simplified short courses catering to physicians of resource-constrained rural and remote settings is the need of the hour. The authors devised Rural Emergency Care Training for Physicians (RECTIFY) as a plausible solution considering the deficiencies and affordability in a resource-constraint setting to deal with occasional emergencies. Cardiac Arrest Resuscitation Short course (CARS) is a module of RECTIFY to equip rural physicians for effective cardiac arrest resuscitation with minimal use of sophisticated gadgets and adjuncts. Authors conceived this cross-sectional study primarily to quantify the current knowledge and skills level in cardiac arrest care and assess whether the RECTIFY-CARS initiative improves knowledge and skills among rural physicians of Asia.

Methodology

Study design: The study was conducted as a three-tier observational study as summarized in Figure 1. After the initial assessment of each participant, formal RECTIFY-CAR**S** training was imparted to the study sample. The contents for the training were meticulously prepared and all efforts were taken to make it appropriate for rural settings. The presentations were lucid, simple, and made interesting with lectures, discussions, and table-top case-based learning with audio-visual aids and hands-on training lasting 3 h. A posttraining evaluation to assess the impact of training and gain of knowledge was carried out.

Study setting: Our intended study population included physicians practicing in rural areas of Asia. However, as no uniform registry of rural physicians were available across Asian countries, they were recruited to our study through rural-themed conferences held between 2017 and 2019 in Asia where RECTIFY-CARS was accepted as a workshop. All rural-themed conferences in Asia were listed and the RECTIFY-CARS session was submitted
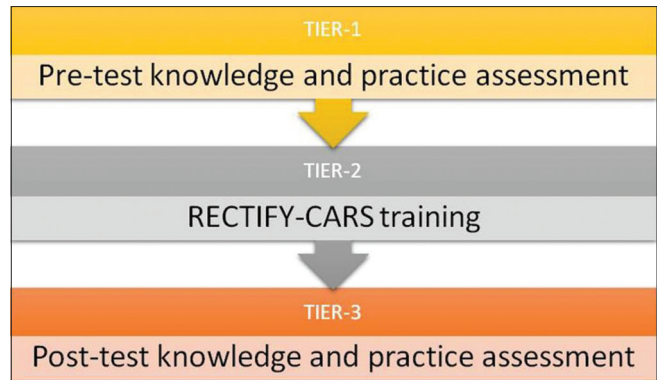

Figure 1: Overview of RECTIFY-CARS study design

for consideration as a preconference workshop. The accepted conferences included Wonca Asia Pacific Regional Conference at Pattaya in Thailand (2017), World Rural Health Conference at New Delhi in India (2018), Wonca World Conference at Seoul in South Korea (2018), and Wonca Emergency Medicine Seminar at Kathmandu in Nepal (2019). All participants received an informed consent form with a comprehensive outline of participant rights and the purpose of the study along with the questionnaire and participation in the study was voluntary.

Study sample: Participants eligible to be included in the study were rural physicians from Asia who registered for the RECTIFY-CARS program in any of the listed conferences. All other healthcare workers, trainees, or interns and physicians from urban areas or those not registered for the workshop or those who had previously attended RECTIFY-CARS were excluded.

Outcome Measures: The primary outcome was to assess the study participants' current theoretical knowledge and practice of cardiac arrest resuscitation based on pretest scores. A secondary outcome measure was assessing the effectiveness of the RECTIFY-CARS module as determined by a significant difference between pretest and posttest scores in theoretical knowledge and practical aspects.

Data sources and measurement: Demographic characteristics and data were collected using a paper-based questionnaire from each participant and skills assessed using proforma for assessment as a pretest. The same questionnaire and proforma were used to assess the gain in knowledge during the posttest after the RECTIFY-CAR**S** training. The questionnaire was designed with multiple-choice questions based on the latest AHA guidelines for CPR. Face validity and content validity were ensured using iterative feedback from emergency physicians, family physicians, and physician trainees after which minor changes were made to the original survey in terms of relevance and revision in formatting or wording until a Cronbach's alpha of 0.81 was obtained. The final questionnaire comprised of basic demographic details and 13 multiple choice questions assessing participants' knowledge of cardiac arrest resuscitation. The scores totaled 15 including multiple correct answers for certain questions with a score of one for each correct answer. It was decided by the authors a priori that there would be no negative

marks for wrong answers. Skills were assessed by strict practical evaluation as per a 20-step checklist prepared by the investigators following AHA 2015 guidelines. The scores for individual steps were awarded only if it were being performed in the correct order.

Bias: As all rural physicians eligible for the study in Asia would not attend the conferences where RECTIFY-CARS was accepted as preconference workshops, a convenience sampling from physicians attending these conferences had to be carried out. To preserve anonymity, to assess practical skills, and to avoid any bias arising out of limited internet access which could occur in rural and remote areas, no electronic survey was carried out.

Study size: Whereas exact data about the total number of rural physicians in Asia was unavailable, as per World Health Organization reports, the number of physicians in most Asian countries was less than one per 1000 population.[10] Assuming the population of rural physicians being less than 25% of all physicians in Asia, with a precision of 5%, and a confidence interval of 95%, a sample size of 400 was targeted.

Statistical analysis: Data entry was performed using the Microsoft Excel spreadsheet (2016 version) and analysis was performed using SPSS 13.0 software (IBM Corp., Armonk, NY, USA). Descriptive and inferential statistical analyses were carried out after the exclusion of data from incomplete questionnaires. Results on continuous measurements were presented on arithmetic mean ± standard deviation (SD) and results on categorical measurements were presented in numbers (%). The categorical variables were analyzed using the Chi-square test and nonparametric tests carried out using the Wilcoxon signed-rank test. Significance was assessed at a 5% level of significance with a *P* value < 0.05 *a priori*.

Ethical considerations: This cross-sectional study was approved by the institutional research and ethics committee where the principal investigator was attached to during the study period. Prior informed consent from individual participants and confirmation of no objection were obtained from conference secretariats where RECTIFY-CARS were accepted as workshops. Data about the identity of participants were not disclosed at any stage of the study.

Results

Basic Demographics: Of all the 700 participants who enrolled for the RECTIFY-CARS workshops held at the four conferences, only N = 622 who returned the filled questionnaires were included in the analysis. The mean age of the participants was 33.24 ± 15.77 years. The majority of the study sample were males (370; 59.5%) and most participants (228; 36.7%) were of the age 21–40 years. On assessing the educational background of the study sample, the majority (213; 34.2%) had a qualification equivalent to post-graduation in Family Medicine, followed by basic medical graduation (206; 33.1%). There were 174 (28%) trained in other medical specialties and 29 (4.3%) in surgical specialties. There were participants from as many as 17 countries

of Asia, the majority being from India (147; 23.7%), Nepal (115; 15.5%), and Thailand (60; 9.64%).

Attitude towards performing CPR: As many as 177 (28.5%) participants reported as having previously attended CPR training programs, out of whom only four could recall their year of the attainment of training. Three (0.5%) had undergone training more than 2 years ago, whereas one (0.2%) underwent training during the past 2 years. None of them had attended RECTIFY so far. Though only 19 (3.1%) reported as having ever attempted CPR in their practice so far, a majority (603; 96.9%) were willing to give CPR in the future.

Pretest assessment

Theoretical knowledge levels: Out of the maximum score of 15, the average score of all participants was 1.5 ± 0.99. As many as 98 participants (15.8%) scored zero. Details of the scoring distribution of participants pretest knowledge are summarized in Figure 2 and a summary of question-wise knowledge of the participants during the pretest is provided in Table 1.

Lacunae identified: A majority (407; 65.4%) wrongly considered calling for help as the first step in cardiac arrest resuscitation instead of assessing scene safety. Many (526; 84.6%) had the misconception of calling for help instead of checking for a response as the second step. If the patient was found not responding to call, 309 (49.7%) respondents wrongly felt they should immediately start CPR instead of checking pulse or breathing. As many as 616 (99%) respondents wrongly responded to "Airway-Breathing-Circulation" (A-B-C) as the sequence of steps while providing CPR. About 391 (62.9%) had a misconception that pulse check is to be carried out for 1 min. About 257 (41.3%) participants responded that they would stop CPR if there is no pulse after one cycle of CPR. The most common misconception regarding the rate of compression was that of 60–70 compressions/min (171; 27.5%), whereas 334 (53.7%) had a misconception that the ideal depth of chest compression was 2 cm.
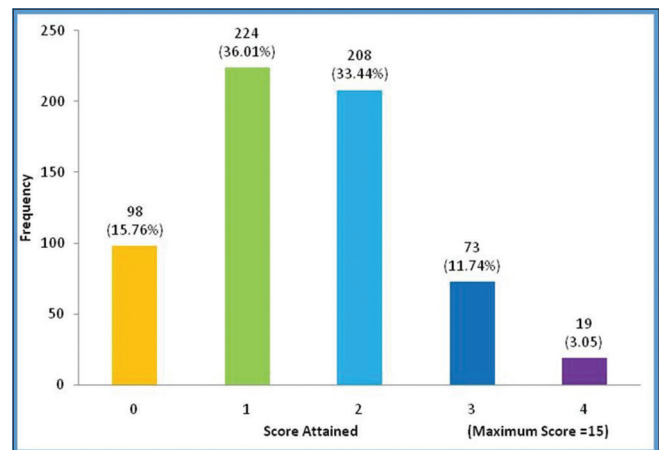

Figure 2: Pretest score profile of knowledge among study participants (N = 622)

Skill levels: Before training was imparted, a mean score of 0.1 ± 0.3 out of 20 was obtained on assessing skill levels among all participants. The scoring profile of pretest skill assessment has been summarized in Figure 3 and the step-wise scores for skills assessed is summarized in Table 2.

Lacunae identified: None of the participants called for help after the initial assessment of unresponsive patients during the practical assessment. Nobody adhered to standard guidelines of two breaths alternating with 30 compressions, using a barrier device, or giving each breath over 1 s. Among the nine persons who tried to handle the AED, four attempted to deliver shock without even switching on the power button. None of the participants resumed chest compressions after giving two breaths or after using AED.

Posttest analysis
Knowledge levels: After the RECTIFY-CARS session, the mean scores of the participants were 10.5 ± 1.5. The posttest score profile and scoring pattern for individual questions are summarized in Figure 4 and Table 3, respectively.

Skill levels: After RECTIFY-CARS training was imparted, the mean score of the participants upon skills assessment was

2.8 ± 1.6. The posttest scores of participants in skills assessment are summarized in Figure 5 whereas Table 4 lists out the step-wise posttest CPR skills level of participants.

Out of the 352 (56.6%) respondents who correctly attempted to assess the unresponsive patient during the posttest, 138 (22.2%) checked scene safety, 172 (27.7%) checked responsiveness, 210 (33.8%) checked for signs of respiration, and 157 (25.2%) called for help. All the participants performed chest compressions, 529 (85%) locking their fingers and placing their hands on the lower half of the sternum. As many as 274 (44.1%) participants performed 30 compressions in 15–18 s and 52 (8.4%) compressed at least 5 cm whereas 50 (8%) allowed for complete recoil of the chest wall in between compressions. About 129 (20.7%) participants attempted giving rescue breaths, however, 124 (19.9%) gave 2 breaths over a barrier device/napkin and 23 (3.7%) gave each breath over 1 s. Only eight (1.3%) resumed compressions in less than 10 s after giving two breaths.

Among the 15 participants (2.4%) who attempted using the AED, 13 participants (2.1%) switched on the power button, whereas three (0.5%) attached the pads properly, two (0.3%) cleared while analyzing rhythm and also during delivering a shock. Only seven (1.1%) participants finished delivering shock and two (0.3%) resumed compressions after delivering a shock with AED.

Secondary outcomes - the impact of training
Posttest gain in knowledge: A significant gain in knowledge regarding CPR was noted among the participants after the RECTIFY-CARS session. The mean score of 10.5 ± 1.5 in posttest assessment was significantly higher as against 1.5 ± 1.0 in the pretest ($P = 0.001$). The score comparisons have been illustrated in Figure 6. Question-wise analysis for improvement in misconceptions was performed among those who wrongly answered the individual pretest questions. Most of the participants corrected their misconceptions and question-wise correction frequencies are summarized in Table 5.
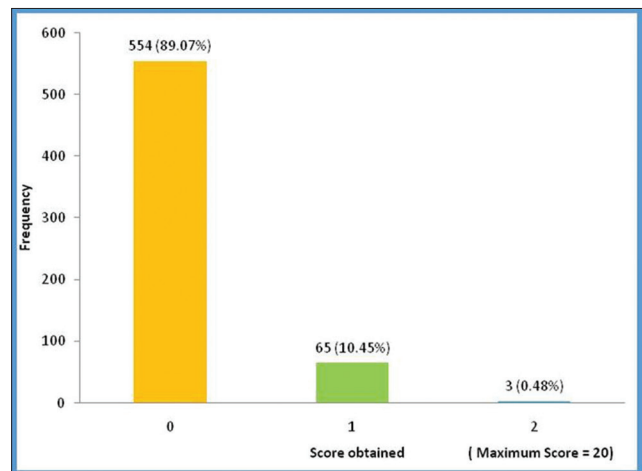
Table 1: Pretest question-wise knowledge of participants (*n*=622)

Question	Knew correctly		Did not know correctly	
	n	%	*n*	%
Ensure scene safety	118	18.97%	504	81.03%
Check for response	50	8.04%	572	91.96%
Call for help	241	38.75%	381	61.25%
Check for pulse/breathing	326	52.41%	296	47.59%
Sequence of CPR	6	0.96%	616	99.04%
Compression: ventilation ratio	16	2.57%	606	97.43%
Head-tilt for opening the airway	9	1.45%	613	98.55%
Chin lift for opening the airway	11	1.77%	611	98.23%
Jaw thrust for opening the airway	13	2.09%	609	97.91%
Pulse check	7	1.13%	615	98.87%
Duration of pulse check	31	4.98%	591	95.02%
Resume compressions	27	4.34%	595	95.66%
Rate of compressions	24	3.86%	598	96.14%
Depth of compression	32	5.14%	590	94.86%
What is AED	24	3.86%	598	96.14%

n=frequency, CPR=Cardiopulmonary Resuscitation, AED=Automated External Defibrillator

Table 2: Pretest step-wise skills level of participants (*n*=622)

Steps	Knew correctly		Did not know correctly	
	n	%	*n*	%
Assess and recognize cardiac arrest	66	10.61%	556	89.39%
Give chest compressions	207	33.28%	415	66.72%
Give rescue breaths	123	19.77%	499	80.23%
Use AED	9	1.45%	613	98.55%
Resume compression after AED use	0	0%	622	100%

n=frequency, AED=Automated External Defibrillator

Figure 3: Pretest score profile of CPR skills among study participants (N = 622)
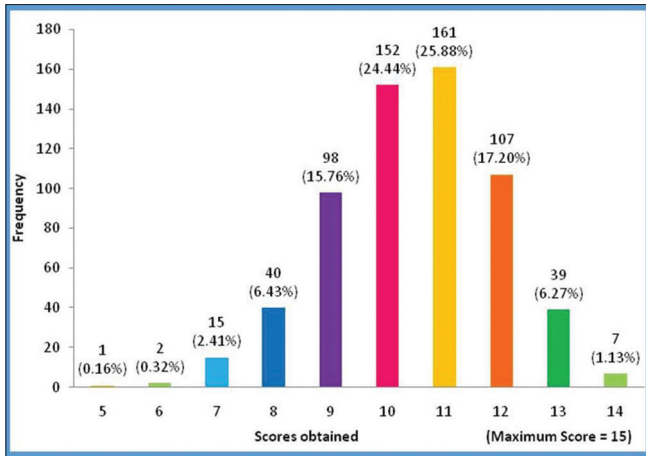
Figure 4: Posttest score profile of knowledge among study participants (N = 622)
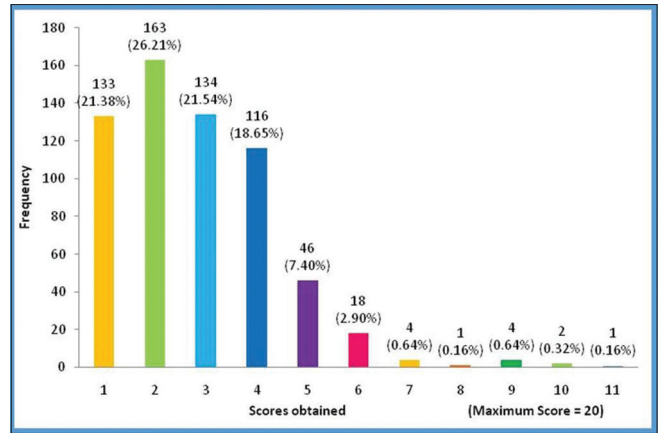

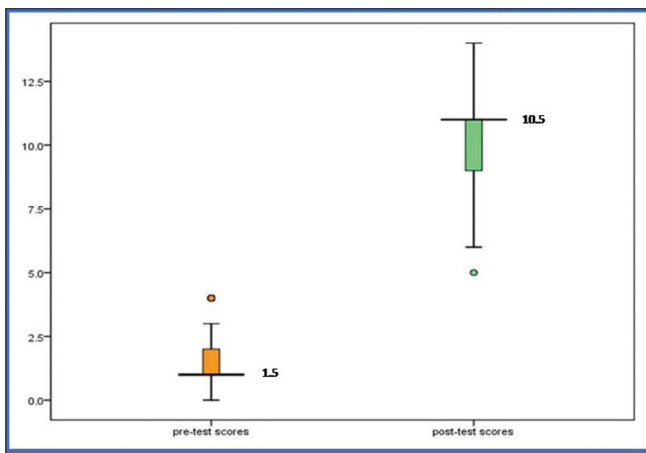**Figure 5:** Posttest score profile of CPR skills among study participants (N = 622)

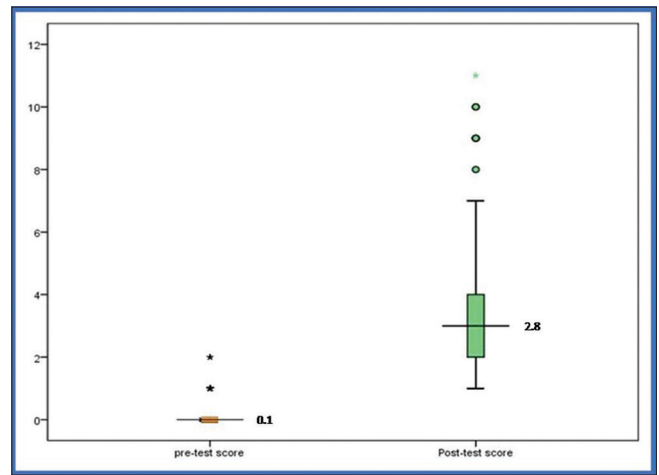**Figure 6:** Box plots depicting knowledge gain after RECTIFY-CARS training

Figure 7: Box plots depicting improvement in CPR skill after RECTIFY-CARS training

Posttest improvement in CPR skills: An improvement in the practice of CPR was noted among the participants after RECTIFY-CARS training as evidenced by significantly higher mean scores of 2.8 ± 1.6 in posttest as against 0.1 ± 0.3 in the pretest ($P = 0.001$) depicted in Figure 7. Among the participants who did not perform pretest assessment steps correctly, the correct frequency for individual steps is summarized in Table 6. A majority (286; 51.4%) showed improvement in correctly assessing the patient for signs of cardiac arrest and all of them (415; 100%) provided proper chest compressions during the posttest. However, the number of participants who correctly attempted to give rescue breaths (six; 1.2%), used AED (six; 1%), and resumed chest compressions after a cycle of CPR or AED use (two; 0.3%) after the training was low.

Impact across groups: The impact of RECTIFY-CARS training was analyzed across various demographic groups. There were no significant differences between gender with regard to the impact of training either in their knowledge or skills assessment. Whereas males averaged scores of 10.5 ± 1.5 and 2.9 ± 1.7, females averaged 10.4 ± 1.5 and 2.7 ± 1.4 in knowledge and skills testing, respectively.

The individual gain in knowledge or improvement in skill was calculated as the difference in individual pretest and posttest scores of each participant. They were regrouped into "low impact" (gain in scores from 0–8 for knowledge and 0–5 for skills assessment) or "high impact" (gain in scores from 8–15 for knowledge and 6–20 for skills assessment). However, comparing these groups across age, gender, education, or country revealed no significant differences.

Discussion

Despite systems of emergency care that includes prehospital care and emergency departments that are separately aligned from traditional primary care systems in rural areas of developed world countries, developing countries and LMICs heavily rely upon primary care machinery for health emergencies due to inherent gaps in infrastructure and advanced systems of emergency care.[11,12]

In most rural and resource-constrained areas of Asia, immediate resuscitation of life-threatening emergencies that culminate in cardiac arrest is habitually ushered to the rural family physicians

Table 3: Posttest question-wise knowledge of participants (*n*=622)

Question	Knew correctly		Did not know correctly	
	n	%	*n*	%
Ensure scene safety	521	83.76%	101	16.24%
Check for response	521	83.76%	101	16.24%
Call for help	527	84.73%	95	15.27%
Check for pulse/breathing	583	93.73%	39	6.27%
Sequence of CPR	548	88.10%	74	11.90%
Compression: ventilation ratio	438	70.42%	184	29.58%
Head-tilt for opening airway	571	91.80%	51	8.20%
Chin lift for opening airway	288	46.30%	334	53.70%
Jaw thrust for opening the airway	39	6.27%	583	93.73%
Pulse check	449	72.19%	173	27.81%
Duration of pulse check	259	41.64%	363	58.36%
Resume compressions	406	65.27%	216	34.73%
Rate of compressions	409	65.76%	213	34.24%
Depth of compression	387	62.22%	235	37.78%
What is AED	558	89.71%	64	10.29%

n=frequency, CPR=Cardiopulmonary Resuscitation, AED=Automated External Defibrillator

Table 5: Correction frequencies of question-wise knowledge during posttest

Question	Knew correctly		Did not know correctly	
	n	%	*n*	%
Ensure scene safety	326	80.10%	81	19.90%
Check for response	435	82.70%	91	17.30%
Call for help	237	76.70%	72	23.30%
Check for pulse/breathing	151	88.82%	19	11.18%
Sequence of CPR	548	88.10%	74	11.90%
Compression: ventilation ratio	370	70.42%	174	29.58%
Head-tilt for opening airway	562	91.68%	51	8.32%
Chin lift for opening airway	279	45.66%	332	54.34%
Jaw thrust for opening the airway	38	6.24%	571	93.76%
Pulse check	329	77.23%	97	22.77%
Duration of pulse check	147	37.60%	244	62.40%
Resume compressions	154	59.92%	103	40.08%
Rate of compressions	175	65.06%	94	34.94%
Depth of compression	198	59.28%	136	40.72%
What is AED	271	94.76%	15	5.24%

n=frequency, CPR=Cardiopulmonary Resuscitation, AED=Automated External Defibrillator

Table 4: Posttest step-wise skills level of participants (*n*=622)

Steps	Knew correctly		Did not know correctly	
	n	%	*n*	%
Assess and recognize cardiac arrest	352	56.59%	270	43.41%
Give chest compressions	622	100%	0	0%
Give rescue breaths	129	20.74%	493	79.26%
Use AED	15	2.41%	607	97.59%
Resume compression after AED use	7	1.13%	615	98.87%

n=frequency, AED=Automated External Defibrillator

Table 6: Improvement in step-wise CPR skills during posttest

Steps	Knows correctly		Did not know correctly	
	n	%	*n*	%
Assess and recognize cardiac arrest	286	51.44%	270	48.56%
Provides chest compressions	415	100%	0	0%
Provides rescue breaths	6	1.20%	493	98.80%
Uses AED	6	0.98%	607	99.02%
Resumes compression	2	0.32%	620	99.68%

n=frequency, AED=Automated External Defibrillator

who face the unique challenge in these situations as lone lifesavers. Hence, a practically feasible and cost-effective solution to improve rural emergency care is by integrating primary care with acute care management where emergency care training empowers the primary care physician.[12-14] While ample studies are assessing CPR knowledge and the impact of training to healthcare workers, prehospital care providers, and laypersons, there is an absolute dearth in the literature about CPR knowledge and skills among rural physicians of Asia. This is the first reported study from Asia that tries to assess both CPR knowledge and skills of rural physicians and the impact of a training to improve cardiac arrest resuscitation at the rural physicians' doorstep. Though only 3.1% reported as having performed CPR ever, a majority (96.9%) were willing to provide CPR in the future which can be considered as positive intent towards cardiac arrest resuscitation among rural physicians.

The overall baseline knowledge level of CPR among rural physicians was poor like in studies across various Asian studies like Octay *et al*.[15] who reported a low level of CPR knowledge among family physicians, cardiologists, and other types of healthcare workers in Turkey. After the RECTIFY-CARS session, the mean scores of the participants in posttest knowledge and

skills improved significantly. This improvement was noticed among all individual participants and across all variables of knowledge testing much like an Indian study by Bhoi *et al*.[1] where a similar significant increase in scores during the posttest after training is reported. However, the study differed in that their sample included medical professionals and laypersons with broader coverage of first-aid topics apart from CPR in the training module.[1] Though the difference in pretest and posttest skill assessment scores in our study were significant, the absolute increase was minimal. In posttest skills evaluation, there was a marked improvement in performing effective chest compressions, but the confidence to provide rescue breaths and the use of sophisticated devices like AED were found to be low among rural physicians. Training rural physicians with compression-only CPR as currently advocated for lay-rescuers is not a plausible solution at a time when evidence promotes early use of defibrillation even by lay rescuers for increasing survival rates among cardiac arrest victims.[16] Given a more simple, time-efficient, and effective training in contrast to other longer duration training programs, RECTIFY-CARS could be recommended to train physicians in resource-poor rural settings to improve CPR outcomes at the grass-root level. This may be read in line with a study by Meaney *et al*. who concluded that

cost-effective strategies are not inferior to traditional techniques and should be developed in resource-limited settings to train healthcare professionals.[17]

Strengths and limitations

The study is unique as it assessed both knowledge and practical skills in cardiac arrest resuscitation among rural physicians from Asia. But as no standardized study tool was available for measuring theoretical and practical knowledge of CPR among rural physicians, the authors prepared a questionnaire based on current AHA guidelines for CPR. This makes quantitatively comparing current study outcomes with other studies difficult. Though the study was not conducted with a control group, the same study sample underwent pretest and posttest using the same tool, and individual scores so obtained were compared to understand the impact of training. Considering a large assumed population of rural physicians in Asia, the study was not evenly spread across subjects from all Asian countries, as RECTIFY-CARS training had to be conducted at geographical regions where conferences were organized. Due to this reason, convenience sampling more than random sampling was applied to select study participants limiting the generalization based on study results.

Future directions

Though initiatives events like mass CPR training events, CPR training of family members of patients, television campaigns, and training of school students or teachers could raise prehospital care awareness,[18,19] the bottleneck in cardiac arrest resuscitation towards better outcomes among patients in rural areas would still be optimal hands-on training for the physician. Though the impact of RECTIFY-CARS training was statistically significant, improvement in certain skill aspects was not on par with the improvement in knowledge. Hence, allotting more time towards "hands-on" training is being contemplated for future programs. Certain grey areas like rescue breaths and AED usage have been identified where the skill levels of rural physicians have not improved as desired. Hence, simplified adjuncts to high-quality CPR could be contemplated for a more universal acceptance while framing future CPR guidelines. It is evident from the study that AED is not popular among rural physicians of Asia. But the authors believe that advocating compression-only CPR among physicians would be a regressive step towards improving survival outcomes of cardiac arrest patients in rural areas. Hence, there is an urgent need to familiarize rural physicians with AED for the successful implementation of public-access-defibrillation programs[20] or other simpler rurally viable alternatives.

Summarizing, our study among rural physicians of Asia revealed high levels of enthusiasm and positive intent but low levels of skills and knowledge in cardiac arrest resuscitation. Their knowledge and skills level both improved significantly after RECTIFY-CARS short course. However, there were notable gaps in skill and knowledge gain with regards to the use of sophisticated devices like AED.

Conclusion

The current study is a landmark study in the evaluation of CPR knowledge and practical skills among rural physicians, the first reported from Asia. The level of knowledge and skill among participants was poor despite the enthusiasm and positive intent. The impact of RECTIFY-CARS on knowledge and skills as a 3-hour "hands-on training" among participant physicians was significant. However, essential gadgets like AED were not impactful which necessitates the use of simpler rural alternatives. In the Asian scenario and other resource-poor rural settings, RECTIFY-CARS is recommended for implementation by health policymakers to improve both knowledge and skills of physicians dealing with cardiac arrest.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Conflicts of interest

There are no conflicts of interest.

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