# JRC Newsletter

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# Message from the International Liaison Committee on Resuscitation (ILCOR)

Gavin D Perkins and Robert Neumar, Co-chairs, ILCOR



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The International Liaison Committee on Resuscitation (ILCOR) is a partnership of regional resuscitation councils from around the world. It was established in 1992 and elebrated 25 years of successful collaboration last year. ILCOR was proud to be joined by the Resuscitation Council of Asia in 2006.

ILCOR's vision is to save more lives globally through resuscitation. We deliver this mandate through promoting, disseminating and advocating for international implementation of evidence-informed resuscitation and first aid, using transparent evaluation and consensus summary of scientific data.

Following rigorous evaluation of published evidence, ILCOR has published Consensus on Science and Treatment Recommendations (CoSTR's) every 5 years since 2000. To meet demands for access to the most up to date evidence, ILCOR has moved to a continuous process rather than 5-year cycle. We are piloting working with specialist Knowledge Synthesis Units and Systematic Reviewers to accelerate summarizing relevant science. The first systematic review conducted by a Knowledge Synthesis Unit in collaboration with ILCOR using the new continuous evidence evaluation process was published in Spring 2017 followed by the CoSTR in October 2017. Our approach is summarized in the figure below which shows defining the research question using Population, Intervention, Comparator, Outcome (PICO) style, assessing evidence in accordance with GRADE methodology and interpreting and summarizing evidence with expert international task forces.

Alongside our work in evidence evaluation, the ILCOR network collaborate to produce Scientific Advisory Statements and Utstein style reporting guidelines for cardiac arrest research. We are committed to expanding our global membership and thus the reach of ILCOR. We have a keen interest in research and registries, under Prof Taku Iwami's leadership and collaborators from the Japanese Resuscitation Council. We look forward to the on-going success of our collaboration with the Resuscitation Council of Asia over the next 25 years.



# Message from the Resuscitation Council of Asia (RCA)

Swee Han Lim, Treasurer and Immediate Past Chairman, RCA Sr Consultant Department of Emergency Medicine and Education Director, Singapore General Hospital



The Resuscitation Council of Asia (RCA) started off humbly with 4 members in 2005 (Japan Resuscitation Council [JRC], Korean Association of Cardiopulmonary Resuscitation, National Resuscitation Council of Singapore and National Resuscitation Council of Taiwan). The Council of CPR, Philippines Heart Association, the Thai Resuscitation Council of the Heart Association of Thailand and the Resuscitation Council of Hong Kong joined RCA in 2010, 2011 and 2016, respectively. RCA has grown to 7 members and currently serves a population of about 386 million people in Asia. The expansion has been limited by the absence of a National Resuscitation Council in most countries in the region. This can be attributed to several factors including the reluctance of Ministries of Health to regulate resuscitation guidelines and training. In addition, the various academic societies involved in resuscitation science such as anaesthesiology, cardiology, critical care, emergency medicine, internal medicine, paediatrics etc in their countries, are not able to come together to form a multi-discipline National Resuscitation Council.

The strength of the RCA is that we respect the independence of each member council and do not interfere with one another's internal affairs. While the Chairman of RCA is the permanent delegate, the member councils take turns to be delegates representing RCA at the ILCOR general assembly. RCA does not have its own scientific meeting, instead, RCA general assemblies are held in conjunction with local, regional or international scientific conferences of anaesthesiology, cardiology, critical care or emergency medicine. The next RCA General Assembly will be held in conjunction with ASEAN Federation of Cardiology Congress in Bangkok Thailand from 28 September to 1 October 2018.

Since RCA became a member of the International Liaison Committee of Resuscitation (ILCOR) in 2006, Members of RCA have contributed to the ILCOR consensus of science and treatment recommendation process eg 18 serving as taskforce members, one expert systemic reviewer (Tetsuya Isayama) plus five mantee expert systemic reviewers (four from Japan and one from Taiwan) and one Working group chair (Taku Iwami). Members of RCA have also published many high impact manuscripts on various aspects of resuscitation, especially hands only CPR, public access defibrillation, extracorporal membrane oxygenation, hypothermia and performance of emergency medical systems.

RCA also serves as a model for future regional resuscitation councils. RCA has been tasked by ILCOR to assist the Pan Arab Resuscitation Council (members consist of National Resuscitation Councils of Bahrain, Jordan, Oman, Saudi Arabia and UAE) in the application to join ILCOR.

It is my honour and pleasure to pen this message to give you a short update on RCA. Sit back and enjoy JRC Newsletter No. 3. United we stand, divided we fall.

# We wish the Development of the Japan Resuscitation Council



A member of the board of Japanese Society of Anesthesiologists Kaneyuki Kawamae. M.D.

As a philosophy, the aim of JSA is to protect patient's lives and to provide safe and comfortable medical care through biological management in emergency and intensive care, and with using pain management and palliative medical care for dealing with disease and surgery, focusing on biological management of patients during the perioperative period. The procedure of anesthesia has been progressed markedly with compared it more than half a century ago, and the number of special anesthesiologists increased more than 5,000. The Japanese anesthesia medical care and management came to be performed safely. The number of accident during the anesthesia decreases dramatically, too.

In succession to an insatiate fight for the resuscitation by the anesthesiologist of past people, we could have got the blessed gift by those making an effort for education and research of resuscitation.

In the area of resuscitation of the anesthesia, it was progressed forward based on control of Prof.Kazuo Okada. He is a legend of JSA and the Japanese society of resuscitation where I acted as a representative director now was founded. He is also a big figure of Resuscitation Council(JRC) which is lower branch of Resuscitation Council of Asia, that is substructure of International Liason Committee on Resuscitation. And JSA is making a substantial contribution to developing the basic science and clinical one of resuscitation. We admire and appreciate that this progress is supported not only from the interest of associative society, some groups and governments, but from a firm sense of mission. Those passion give all people the Gospel of happiness, bring the members concerned a technique and knowledge and bring a look of trust and respect to the taskforce. The guidelines from a JRC are made by the members from the society to participate in, and it is in extremely substantial contents. It is now the base of the health care of resuscitation in Japan. We will show the will of sincere thanks to JRC and expect more and more development in the future. The role of the anesthesiologist provides medical care of the reliable security to all patients with the idea above and is to succeed to further study and education. Knowledge and technical acquisition about the resuscitation are extremely important to practice them.

Therefore the Japanese Society of Anesthesia will make an effort in order to make a contribution as one of the associated society, groups as an important pillar of this meeting. Besides, We strengthen the cooperation with JRC and contribute to progress development. The members concerned, thanks in advance for your help.

# Pediatric Society Pediatric Emergency Medicine Japan Resuscitation Symposium

The 11<sup>th</sup> Japan Resuscitation Science Symposium

Resuscitation science: to protect our country's 'future' beyond the academic field—towards developing the 2020 guidelines

Term : 19<sup>th</sup>, April 2018

Venue : Fukuoka Convention Center 4F, 411+412

President : Professor Shinichi Hirose (The 121<sup>st</sup> Annual Meeting of the Japan Pediatric Society) Orgsnizeed by Japan Pediatric Society

Co-organized by Japan Resuscitation Council

Corporated by Fukuoka prefecture medical associasion, Buzen-Tikujo medical associasion, Kasuya medical associasion, Chikushi medical associasion, Kurume medical associasion, Kitakyushu medical associasion, Yahata medical associasion, Munakata medical associasion, Tagawa medical associasion, Fukuoka city medical associasion, Itoshima medical associasion, Moji medical associasion, Onga Nakama medical associasion, Kokura medical associasion

### Pediatric Society Pediatric Emergency Medicine Japan Resuscitation Symposium The 11<sup>th</sup> Japan Resuscitation Science Symposium Program

9:00~9:05	Opening Remarks
	Shinichi Hirose (President of the 11th Japan Resuscitation Science Symposium, Professor of the Department of Pediatrics Fukuoka University Faculty of Medicine)
9:05~9:15	Foreword from the President of the JRC
9.00 9.10	
	Hiroshi Nonogi (President of JRC, Shizuoka General Hospital)
9:15~11:45	Simposium 1 "Long-term neurologic outcomes following resuscitation : updated reports
	from prehospital, cardiopulmonary resuscitation and neuro critical care fields"
	Co-Chairs: Yasuhiro Kuroda (Department of Emergency, Disaster, and Critical Care Medicine, Faculty of Medicine, Kagawa University)
	Hiroshi Kurosawa (Pediatric Critical Care Medicine, Hyogo Prefectural Kobe Children's Hospital)
	Presenters: Takaya Ikeyama (Aichi Children's Health and Medical Center)
	Osuke Iwata (Department of Neonatology and Pediatrics, Nagoya City University Graduate School of Medical Sciences)
	Junichi Takanashi (Department of Neonatology and Pediatrics, Tokyo Women's Medical University Yachiyo Medical Center)
	Migaku Kikuchi (Department of Cardiovascular medicine, Emergency medical care center, Dokkyo Medical University Hospital)
	Shunji Kasaoka (Emergency and General Medicine, Kumamoto University Hospital)
	Shoji Yokobori (Emergency and Critical care medicine, Nippon Medical School of Hospital) < Questions and Answers (11:15 ~ 11:45) >
11:45~12:00	Tea break
12:00~13:00	Luncheon Seminar Co-hosted by Masimo Japan Co., Ltd.
	Chair: Satoshi Ibara (Department of Neonatology, Perinatal Medical Center, Kagoshima City Hospital)
	Presenters: Seiki Abe (Department of Anesthesia, Nagano Children's Hospital)
	Naoki Shimizu (Tokyo Metropolitan Children's Medical Center/Fukushima Medical University)
13:00~13:15	Tea break
13:15~14:00	Poster session
14:00~14:10	Tea break
14:10~14:55	Special Lecture "Japan Pediatric Life Support will promote the cardiopulmonary
	resuscitation for children in Japan"
	Chair: Takao Takahashi (Professor, Department of Pediatrics, School of Medicine, Keio University)
	Presenter: Takashi Igarashi (President of the National Center for Child Health and Development)
15:00~16:15	Simposium 2 "Aiming for Zero Deaths: Prevention of Sudden Cardiac Death in Schools"
	Co-Chairs: Satoshi Takeda (Department of Emergency, Jikei University School of Medicine)
	Kunio Ohta (Department of Pediatrics, Kanazawa University Graduate School of Medicine)
	Presenters: Satoshi Takeda (Department of Emergency, Jikei University School of Medicine)
	Yoshihide Mitani (Department of Pediatrics, Mie University Graduate School of Medicine)
	Tomoo Kanna (Department of Anesthes and Intensive Care Unit, St.Mary's Hospital)
	Tetsuo Hatanaka (Emergency Life-Saving Technique Academy of Kyushu)         < Questions and Answers (11:15 ~ 11:45) >
16:15~16:30	JRC Okada Award Ceremony Kazuo Okada (Emeritus President of JRC)
16:30~17:25	Simposium 3 "Towards further prevention of pediatric cardiac arrests based on proactive
	investigations into their causes and etiology"
	Co-Chairs: Masahiko Nitta (Department of Emergency Medicine, Osaka Medical College)
	Naoki Shimizu (Tokyo Metropolitan Children's Medical Center/Fukushima Medical University)
	Presenters: Fumitake Mizoguchi (Maebashi Red Cross Hospita)
	Masao Yoshinaga (National Hospital Organization Kagoshima Medical Center)
	Kei Murayama (Chiba Children's Hospital)
17:25~17:30	Closing remarks
	Hiroyuki Matsuura (Professor, Department of Pediatristic, Toho University)

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# Greeting for the 11<sup>th</sup> Japan Resuscitation Science Symposium 2018



Hiroshi Nonogi President of Japan Resuscitation Council, Shizuoka General Hospital

The 11<sup>th</sup> J-ReSS (Japan Resuscitation Science Symposium) and Pediatric Emergency Resuscitation Symposium were organized by the President Shoichi Hirose in the Japan Pediatric Society (President of the 121<sup>st</sup> Annual Meeting of the Japan Pediatric Society, Professor of Department of Pediatrics, Fukuoka University Faculty of Medicine) in Fukuoka. "Children" are the future of our country under the slogan "Protecting children". In the program, a special lecture and three symposiums were planned, covering issues from prevention of cardiac arrest in all ages to the post-cardiac arrest care. I would like to express my gratitude to all members of the executive committee who promoted this symposium.

The International Liaison Committee on Resuscitation (ILCOR) has changed the international consensus (CoSTR) creation policy from a revision every five years to consecutive creation for important topics. It is an important year for Japan that should be examined including future cooperation with Asia and the development of new RCA guidelines. CoSTR on adults and children has already been published in the field of BLS. In RCA, the working group of each resuscitation area was established, and the creation of common guidelines in Asia has been started. This symposium should be a very important academic meeting in that sense.

The first J-ReSS was held in Fukuoka in 2008 and the second was held as an International-ReSS at the opportunity to gather together the world's resuscitations specialists. When the Asia Emergency Medical Association was held in Tokyo in 2013, it was held as Asian-ReSS. This time is the third time of J-ReSS to be held in Fukuoka.

From the beginning of JRC, pediatricians in the resuscitation field demonstrated leadership not only in Japan but also in ILCOR. Therefore, holding J-ReSS by the Japan Pediatric Society was a long-awaited reminder for JRC members.

I hope that J-ReSS will be an opportunity for the future progress of JRC and will be a driving force for resuscitation science in our country.

# Pediatric Society Pediatric Emergency Medicine Japan Resuscitation Symposium

(The 11th Japan Resuscitation Science Symposium)

#### Shinichi Hirose

Chairman of the Japan Pediatric Society Pediatric Emergency Medicine Resuscitation Symposium (The 11th Japan Resuscitation Science Symposium) and Professor in the Departomet of Pediatrics, School of Medicine, Fukuoka University, Fukuoka, Japan



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The Japan Pediatric Society is co-hosting the Japan Pediatric Society Pediatric Emergency Medicine Resuscitation Symposium [The 11th Japan Resuscitation Science Symposium (J-ReSS)] with the Japan Resuscitation Council (JRC) at the Fukuoka International Congress Center on Thursday, April 19, 2018. The first J-ReSS was held in Fukuoka in 2008 and the ninth J-ReSS was also held in the same venue in 2016. I am delighted that the J-ReSS will be held again in Fukuoka for the third time and would like to express my appreciation to our members for this precious opportunity.

In addition to the Japan Pediatric Society, the Japanese Society of Emergency Pediatrics, the Japanese Society of Pediatric Anesthesiology and the Japanese Society of Intensive Care Medicine Pediatric Intensive Care Committee also took part in the JRC as leading organizations in the pediatric field. These organizations have contributed to developing resuscitation guidelines which can be used worldwide by eliminating the division between adults and children and making efforts to integrate the chain of survival and algorithms. We have received a wide range of support and intend to bring such enthusiasm to the 11th J-ReSS.

The theme for this year's J-ReSS is "Resuscitation science: to protect our country's 'future' beyond the academic field—towards developing the 2020 guidelines—." Resuscitation events are rare in children compared to adults. Therefore, various challenges remain unsolved. Children are our country's future and protecting the lives of these irreplaceable children is our society's mission. The biggest goal is to raise awareness of the slogan, "to protect children," as our country's shared challenge by spreading the messege through resuscitation science presented by pediatric related organizations, including the Japan Pediatric Society.

We hope that participants will learn about the latest resuscitation science in this symposium. Fukuoka is where the door opens to Kyushu as well as to the world. In addition to hearing about the latest academic matters, delicious food, such as seafood from the Genkai Sea, awaits the participants. We are looking forward to welcoming people from many disciplines to discuss the future of children from the viewpoint of resuscitation science.

# Resuscitation Science: to Protect Our Country's "Future" beyond the Academic Field — Towards Developing the 2020 Guidelines

Japan Pediatric Society Pediatric Emergency Medicine Committee, J-ReSS Executive Subcommittee Chairman: Naoki Shimizu

Vice chairmen: Kunio Ohta and Masahiko Nitta

Committee members: Takanari Ikeyama, Noriyuki Kaku, Hiroshi Kurosawa, Yasuhiro Kuroda, Satoshi Takeda, Hiromichi Taneichi, Yosuke Nakabayashi, and Shigeharu Hosono

The Japan Pediatric Society is hosting the Pediatric Emergency Medicine Resuscitation Symposium [The 11<sup>th</sup> Japan Resuscitation Science Symposium (J-ReSS)] co-sponsored by The Japan Resuscitation Council (JRC). The Japan Pediatric Society Pediatric Emergency Medicine Committee (Chairman: Hiroyuki Matsuura) will take charge of the plan proposal and the J-ReSS executive subcommittee has been formed. The theme for this year's J-ReSS is "Resuscitation science: to protect our country's 'future' beyond the academic field—towards developing the 2020 guidelines—." A keynote speech and several symposiums are planned, which will provide opportunities for comprehensive discussions that are not limited to the pediatric field but also to adults as well as neonates.

The JRC has established the "chain of survival" used for both children and adults as a concept for protecting lives from cardiac arrest. As you are aware, the chain of survival starts with the prevention of cardiac arrest. When such prevention fails, it is followed by early recognition and calls for help (calling 119) and then life support and critical care provided based on the guidelines. With the concept of the chain of survival in mind, we hope to discuss how we can protect children, our country's future together.

First, for the keynote speech, we have asked Dr. Takashi Igarashi, the former Japan Pediatric Society chairman to talk about developing the "Japan Pediatric Life Support (JPLS) course," which is also used as a pediatric emergency medicine resuscitation education program based on the JRC resuscitation guidelines. We have also asked Dr. Igarashi to address various emergency resuscitation-related challenges faced by pediatricians in Japan. In addition, we have asked Dr. Takao Takahashi, the present chairman to preside.

In Symposium 1, we will learn how to protect neurological function after cardiac arrest along with other current topics and discuss long-term outcomes. In Symposium 2, we will discuss how we can save lives of school-aged children from sudden cardiac arrest in school by cooperating with residents and adults. Sudden cardiac arrest in school has gained social attention because of the high probability of saving the lives from this type of cardiac arrest. Finally, in Symposium 3, we will mainly discuss infant cardiac arrest for which effective measures have not been developed except for prevention from the viewpoint of a child death review, which is essential in terms of protecting the next generation.

We continue to believe that the concept of "protecting children, our country's future," will contribute to the advancement of resuscitation science in our country. We are looking forward to seeing many participants as well as to the lively discussions.

## A digest of the JRC 2015 Resuscitation Guideline Neonatal Cardio-Pulmonary Resuscitation

#### Shigeharu Hosono

Chair of Committee on Neonatal Resuscitation, Japan Society of Perinatal and Neonatal Medicine Nihon University School of Medicine Department of Pediatrics and Child Health

The NCPR algorithm is shown in Figure 1.

- show assessments of the neonate's status, and
   show actions taken in response to the results.
- To determine the resuscitation needs of a neonate immediately after birth, check for three criteria: (1) preterm gestation, (2) weak respiration or crying, and (3) weak muscle tone. If the neonate does not meet any of these criteria, provide routine care while keeping the neonate with the mother. However, if the neonate meets even one of these criteria, follow the resuscitation sequence and start the initial steps.
- Complete the initial steps and assess two vital signs (breathing and heart rate) simultaneously after approximately 30 seconds. If the neonate is breathing spontaneously and the heart rate is at least 100/min, determine the need for respiratory support by checking for two more criteria:

   (1) labored breathing and (2) (central) cyanosis.
- If the neonate is not breathing spontaneously (including gasping) or if the heart rate is less than 100/min after initial steps, initiate ventilation and attach a pulse oximeter. Consider also using an ECG monitor. While providing ventilation, always confirm the effectiveness of the ventilation by checking for an increase in heart rate and chest movements (Rescue sequence).

- Approximately 30 seconds after starting ventilation, assess breathing and heart rate. If the heart rate is 60 to 100/min, assess the effectiveness of ventilation and consider correcting ventilations including endotracheal intubation. Start chest compressions and ventilation if the heart rate remains lower than 60/min despite30 seconds or more of effective ventilation.
- Proceed to the drug administration/fluid replacement step if the heart rate remains lower than 60/min despite 30 seconds or more of coordinated chest compressions and ventilations.
- In summary, allot approximately 30 seconds to each procedure, assess the effectiveness of the intervention, and then determine whether to continue to the next step. It is not possible to proceed to the next step without completing the previous one. Therefore, 30 seconds is not an absolute figure. For example, in the ventilation step, it is not possible to proceed to the subsequent step of chest compressions without confirmation of effective ventilation, even if 30 seconds had passed.

#### Reference

Japan Society of Perinatal and Neonatal Medicine. "The Neonatal Cardio-Pulmonary Resuscitation (NCPR) Project" (English version website). Available from: http://www.ncpr.jp/eng/



### **Editorial Note**

It is a great pleasure for us at the Japan Resuscitation Council (JRC) to know that the "JRC Newsletter English Edition," launched on the 15th anniversary last year, has been welcomed by many readers around the world. Here, the third issue of this newsletter is briefly introduced.

First of all, Gavin D. Perkins and Robert Neumar, Co-Chairs of the International Liaison Committee on Resuscitation (ILCOR) contributed a great message, concluding "we look forward to the on-going success of our collaboration."

Second, Swee Han Lim, Treasurer and Immediate Past Chairman of the Resuscitation Council of Asia (RCA) contributed another great message, concluding "United we stand, divided we fall." Messages from global leaders in this field will follow in succeeding issues.

Third, we have begun to publish a series of messages from representatives of each of the societies and organizations that constitute the JRC. In this issue, Professor Kaneyuki Kawamae contributed as a Member of the Board of Directors of the Japanese Society of Anesthesiologists (JSA), which has made an important contribution to the JRC from its foundation.

Next, we published the program and greetings from the eleventh Japan-Resuscitation Science Symposium (J-ReSS), which was held last April 19<sup>th</sup> at Fukuoka City.

Finally, "A digest of the JRC 2015 Resuscitation Guideline: Neonatal Cardio-Pulmonary Resuscitation" were summarized by Shigeharu Hosono.

JRC is an interdisciplinary academic society of high public interest for the improvement of clinical and scientific affairs on cardiopulmonary and cerebral resuscitation. Together with the ILCOR and RCA and others, JRC is creating the "2020 JRC Resuscitation Guidelines." In the next issue, we will provide a brief sketch of the progress.

We request your feedback on the "JRC Newsletter English Edition" to ensure it remains a valuable resource for the global and domestic progress of resuscitation and resuscitation science.

> Masao Nagayama, MD, PhD, FAAN, FACP Secretary-General, Japan Resuscitation Council (JRC) Professor, Department of Neurology, International University of Health and Welfare Graduate School of Medicine

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