

## Rural emergency skills training

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### ABSTRACT

The Rural Workforce Agency Victoria (RWAV) has developed a life support course specifically for rural general practitioners. The Rural Emergency Skills Training (REST) program runs over 2 days and utilises the latest clinical knowledge and protocols for training in medical, paediatric and psychiatric emergencies, and trauma.

REST has been developed by Dr David Campbell, a rural GP in Lakes Entrance, Advanced Paediatric Life Support (APLS) Instructor, and Senior Lecturer at the Monash University School of Rural Health, with the assistance of key rural GPs and other specialist teachers.

The aim of REST is to enhance the skills in the initial management of medical emergencies in rural areas. The course is designed to be applicable in a variety of settings, to be flexible, transportable and relevant to a spectrum of knowledge and skills amongst participants.

RWAV utilises rural GPs trained under the Emergency Medicine Teacher Training (EMTT) Project, conducted by the Rural Faculty of the Royal Australian College of General Practitioners (RACGP), to deliver the course.

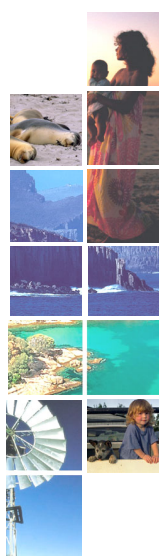
In July 2002, RWAV successfully conducted 2 pilots of the REST program with 28 overseas-trained doctors (OTDs) recruited to rural Victoria through the Rural Locum Relief Program (RLRP). Funding for the pilots was provided by the Rural Faculty of the RACGP as part of the evaluation of the EMTT Project

### INTRODUCTION

Rural general practitioners are often the first contact for medical emergencies in rural areas and are often a considerable distance from accident and emergency departments or specialist support. Therefore the provision and maintenance of emergency skills are considered essential for all rural GPs (1)(2)(3).

A study of 84 rural GPs within the Hunter Rural Division of General Practice revealed that more than a third of GPs who were responsible for on-call work at their local hospital indicated that they had low levels of confidence in a number of their emergency medicine skills, in particular skills relating to paediatric emergencies, cardiovascular emergencies and respiratory emergencies (4).

As the lead body for the recruitment and retention of general practitioners in Victoria, the Rural Workforce Agency Victoria (RWAV) has assessed over 300 doctors since 1998, to ascertain their suitability to rural general practice. Over 95% of these doctors completed their primary medical degree in another country.



The assessment is comprised of referee checks, structured interview and a structured clinical examination. Successful applicants are then selected into the Rural Locum Relief Program (RLRP) or the 5-year Victorian Overseas Trained Doctors Rural Recruitment Scheme (VORRS) and matched to an appropriate rural practice.

As of October 2002, there were 158 GPs currently working in rural Victoria who were recruited through these 2 schemes. Of these 68 (43%) have been recommended to undertake additional emergency medicine training within their first 6 months of general practice.

Unfortunately, the waiting lists for rural GPs to enrol in the existing life support courses (Advanced Paediatric Life Support – APLS, Emergency Life Support – ELS and Early Management of Severe Trauma – EMST) are up to 18 months. In addition only a small percentage of these programs are delivered in rural areas.

Based on current figures RWAV expects to annually place approximately 60 GPs into rural general practice, of whom approximately 26 will require emergency life support training. In addition there is considerable interest from Australian trained GPs to utilise this program to refresh their emergency medicine skills. The RACGP also recommends that all rural stream registrars undertake courses of this nature.

## THE REST PROGRAM

RWAV has developed an accredited 2-day emergency medicine life support course to meet the demand of overseas-trained doctors recruited to rural general practice in Victoria. The REST course equips participants with the necessary skills for the early management of paediatric, medical, psychiatric emergencies, and the management of emergencies involving trauma.

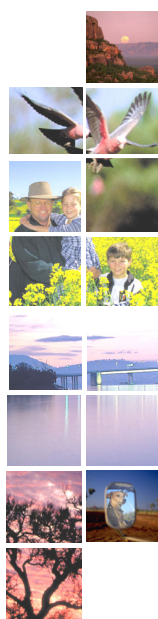
RWAV consulted extensively with emergency physicians, paediatricians, surgeons and rural GPs regarding the structure and content of the course. The course is delivered by experienced rural GP teachers, in conjunction with emergency medicine specialist teachers in rural locations.

In 2001, RWAV administered in Victoria, the Emergency Medicine GP Teacher Training on behalf of the RACGP Rural Faculty. The aim of this program was to provide suitably qualified rural GPs with specific teacher training to pass on their emergency medicine skills to other GPs, registrars and medical students in their region. There were four workshops conducted in rural Victoria, which trained 65 rural GP teachers. A legacy of this program has been the permanent supply of emergency medicine equipment at each of these locations.

RWAV utilises these rural GP teachers to facilitate the REST program. Research has clearly shown that GPs learn best when instructed by other GP specialists who are able to provide a context for the learning (5)(6).

Thus the REST program fulfils two roles; it provides

- much-needed emergency medicine training for rural GPs (especially those newly recruited from overseas)



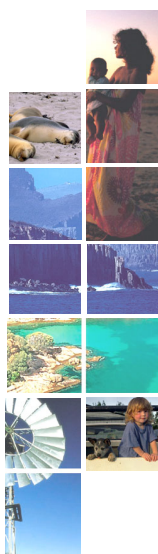
- the opportunity for rural GPs experienced in emergency medicine to develop their teaching and instructing skills.

## THE REST PILOTS

The RACGP Rural Faculty provided RWAV with funding to pilot 2 REST programs. In July 2002, 28 overseas-trained doctors (OTDs) recruited through the Rural Locum Relief Program (RLRP) attended these pilots in Melbourne and Bendigo. The courses were conducted simultaneously.

Seven rural GPs who had completed the EMTT program and 5 experienced GP instructors who ran the EMTT courses delivered the REST pilots.

Participants were assessed through pre and post multiple-choice examinations and assessment scenarios. Both instructors and participants completed a comprehensive evaluation at the conclusion of the program.



## THE REST MANUAL

All REST trainees and trainers received a copy of the comprehensive REST manual. This manual details the range of emergencies arising in rural practice, encompassing best-practice principles of emergency care in a format readily accessible in emergency situations.

The REST manual is divided into 27 chapters. The initial chapters provide the majority of the content for the first day of the REST course and outline the structured approach to the critically ill or injured patient. These chapter also include protocols for the assessment and management of airway, breathing and circulation emergencies.

The second half of the manual provides guidelines for the treatment of a variety of conditions including the management of

- obstetrics emergencies
- neurological emergencies
- psychiatric emergencies
- metabolic and endocrine emergencies
- envenomation and poisoning
- orthopaedic emergencies
- burns and smoke inhalation
- infectious diseases etc.

A large proportion of the material in these later chapters is not specifically covered in the REST course and is included as reference material for the participants.

The concluding chapters of the manual, which were developed after the pilots, provide GPs with additional information on:



- radiology in emergency care
- the emergency retrieval services operating in Victoria
- vital equipment and drugs required both in the doctor's bag and the practice
- information on indemnity cover in Victoria for rural GPs.

## THE REST TRAINING PROGRAM

The REST course is conducted over two 9-hour days. The delivery of the program combines the use of lectures, small group discussions, skill stations and clinical scenarios and is taught by experienced rural GPs with a ratio of 5 trainers to 16 trainees.

During the skill stations and clinical scenarios the participants were divided into groups of 4 each with a facilitator. During the course the participants gained exposure to and practiced the following skills;

- endotracheal intubation
- cricothyroidotomy
- chest drain
- cervical collar application
- intraosseous needle insertion
- defibrillation
- vascular access
- regional anaesthesia.

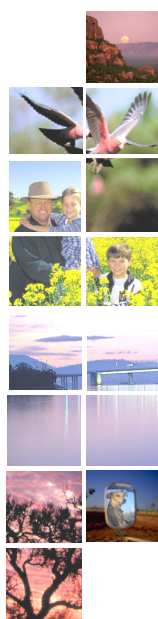
The scenarios developed for the course were divided into four categories, adult trauma, paediatric trauma, adult medical and paediatric medical situations. All the scenarios were developed with flexibility, which allowed the instructor to tailor the exercise to level of the learner.

Each trainee was given the opportunity to practice each of the skills stations and play the lead role in the scenarios. At the end of the second day each participant was assessed by leading a clinical scenario.

In addition the trainees were required to complete pre and post multiple-choice examinations and complete a written evaluation of the REST course.

## EVALUATION

Overall the REST program was a resounding success. The evaluation of the trainees indicated that they possess a high interest in learning emergency life support skills. They found the content and delivery of the course relevant to their practice and the development of their knowledge of emergency medicine.



The trainees acquired the following new skills.

Skill	Respondents / 28
Structured approach of the ABC's	5
Intraosseous lines	5
Thoracocentesis	4
Management of envenomation	3
Defibrillation	2
Intubation in children	2
Regional anaesthesia and femoral block	2

As a result of attending the course, many of the trainees responded that they had more confidence in dealing with medical emergencies on their own and would apply a more methodical approach in an emergency situation.

A number of trainees decided to explore the equipment, facilities and protocols available at their local hospital and have more emergency equipment on hand. Many of the GPs were keen to repeat the REST again next year in order to maintain their skills and practice.

In turn the GP trainers displayed a confident response to teaching emergency medicine at the REST program having benefited from their preparation at the Emergency Medicine Teacher Training program. The trainers were confident in their ability to set up and facilitate skill stations, small group discussions and scenarios, and debrief the learners using reflection and feedback.

However the trainers reported less confidence in their ability to access the learning styles of a learner and match their teaching approach to that style, and deal with a difficult or disruptive learner.

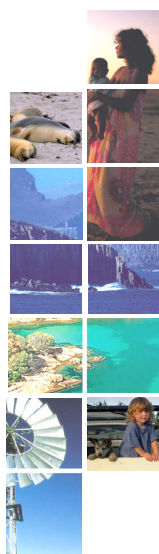
All the facilitators at the REST pilots were keen to be involved in the delivery of future REST programs.

From the written evaluation and the debriefing conducted with the REST trainers it has been agreed that the following amendments will be made to future REST courses.

1. The ABC's need to be continually reinforced through out the program. In a number of cases the trainees were unable to adequately demonstrate the ABC approach in subsequent scenarios through out the 2 days. In addition many of the trainees were over eager to provide a clinical diagnosis and administer specific treatment for some of the scenarios while missing or ignoring key life threatening symptoms.

In response to this issue RWAV has re developed the manual to emphasise the ABC approach in each chapter. Subsequent REST programs will also devote more time to the trainees demonstrating the structured approach to the critically ill or injured patient during the first day of the course.

2. Unfortunately RWAV was unable to provide the participants with a copy of the REST manual until a couple days before the course. At future programs the REST manual will be sent out to all participants at least 2 weeks prior.



3. The REST program was deemed to be over ambitious in the amount of content and lecture material presented over the 2 days. The trainees preferred more time to be dedicated to small group discussions, skill stations and scenarios where the real hands on learning occurs.

For future REST programs RWAV will scale down the lecture content and incorporate greater time for the participants at the skill stations and scenarios, with scenarios allocated a minimum of 30 minutes.

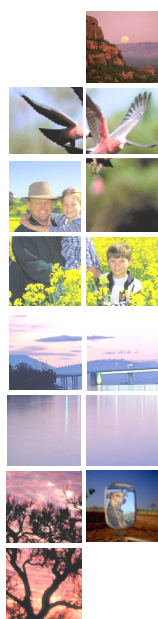
There is also a need to have more small group discussion used in conjunction with the lecture material. Therefore the PowerPoint presentations will be amended so they can be used to supplement the content of the training manual.

4. There was a vast range of experience amongst the trainees. These doctors had all received their basic medical training in different countries and had subsequently practiced in a broad range of clinical settings across the world. A small number of the trainees had a wealth of practical experience in the delivery of emergency medicine in their native country and Australia while other attendees had obtained little exposure to emergency care since graduation. In general the trainees who attended the pilots would be considered to be at the lower end of the scale.

This diversity in ability provided a great challenge to the trainers who had to continually adjust the scenarios to the level of the learners.

In the future courses the scenarios will demonstrate a more graded approach with the earlier scenarios dealing with issues such as airway management with more complex scenarios featured later. RWAV will need to develop a bank of simpler scenarios to meet the needs of GPs attending this course. The teaching regional anaesthesia is considered too advanced for the current scope and content of the course.

5. On a practical level RWAV needs to develop detailed protocols for the design and set up of the skill stations and scenarios to allow a more seamless integration of these activities into the course. Assisting staff are required to be adequately briefed in equipment requirements and usage for these activities.
6. It was suggested that the course could incorporate the use of more flow charts and video presentations to deliver the course information and provide examples of clinical scenarios.
7. Results from the pre-course multiple-choice tests provided RWAV with little indication about the actual skills of the trainees in emergency situations. As a result both the pre and post-tests will have additional extended answer components added.



## FUTURE DIRECTIONS

Since the piloting of the REST program RWAV has redeveloped the manual to reflect a greater emphasis on the ABC approach and incorporated additional reference chapters for rural GPs.

RWAV plans to deliver the REST program in Melbourne and selected Victorian regional centres 4 times a year. The REST course will specifically target OTDs newly recruited to rural general practice through the Victorian Overseas Trained Doctors Rural Recruitment Scheme (VORRS) and Rural Locum Relief Program (RLRP).

In addition RWAV has received substantial interest from Australian-trained rural GPs, rural GP registrars, and OTDs working in rural and regional hospital emergency departments and is looking at delivering additional courses to these groups.

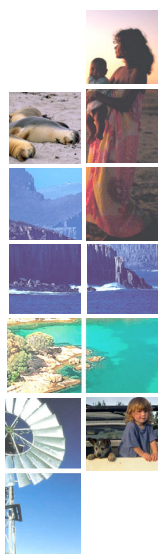
In conjunction with the Monash University School of Rural Health the REST program is to be developed into a modular format for delivery in an online learning environment.

## ACKNOWLEDGMENTS

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## PRESENTER

**David Campbell** has worked as a rural doctor for the past 20 years, the last 17 of those in Lakes Entrance in Victoria. He has been a supervisor and undergraduate GP teacher for many years, and is a member of the newly-formed Gippsland Board of GP Education and Training. David's professional interests include emergency medicine, medical education, hypnotherapy and sports medicine.

David is currently Senior Lecturer at Monash University School of Rural Health, Victorian Director – ACRRM, a Board Member of the Rural Workforce Agency Victoria, Chair of the Emergency Medicine Teacher Training Project Steering Committee, an Instructor of the Advanced Paediatric Life Support Course, and an Ambulance Medical Officer for Rural Ambulance Victoria.

