Proactive: Taking Initiative with New Information

As the world around us becomes more fast-paced with advances in medicine, technology, communication and science, we are often presented with new information. Sometimes the information sparks a question producing a slight refined change in trajectory while other times it reaffirms what is already held to be the standard. This month’s issue discusses several new pieces of information and ways it impacts us and what we can do to be proactive in enhancing and strengthening our agency, our industry and our own personal lives.

With changes in the American Heart Association’s (AHA) recommendations for cardiopulmonary resuscitation (CPR), Tom Leaird asked the question – “How does this impact diver rescues in deep water?” With a combined team effort from Divers Alert Network and the Underwater Hyperbaric Medical Society, an answer was provided and our DRAM Rescue protocols have been modified to reflect the newest information and procedures available at this time. New information has caused us to be proactive and modify protocols.

Research findings also have reaffirmed that scuba diving has a significant effect on young divers leading to an increase in possible hypothermia and brachycardia (slow heart rate). Our agencies have established as our minimum age for certification - age 12 - with a maximum depth limit of 40 feet. It is wonderful that young individuals and parents want families to dive together and we welcome them for classes once they are older than 12. New information has validated our standards.

Some of our leadership are newly trained while others have been teaching for decades. Whether you have been on forty dives or several thousand dives, something must be driving you to dive. Do you take time to appreciate and enjoy your dives? Even if a dive is ‘routine’, there is always something to look forward to and if you find yourself in a rut – think outside the box, be creative, and remember why you are a diver. New information can remind us what it is we love about our sport.
International Growth

April
SEI & PDIC Italy hosted an Instructor and Instructor Trainer Institute welcoming more into our ranks.

Congratulations to Massimiliano Stirparo, who became the first SEI & PDIC Instructor to earn the title of Training Manager for Divers Alert Network (DAN) Europe in Italy.

June
Mr. Yip and Mr. Hakan Taspinar, with dive centers in Singapore, visited the SEI headquarters in Muncie, Indiana. They were joined by Mr. Kevin Kim, SEI & PDIC Asia, as well as Tom Leaird, SEI & PDIC CEO, and Thadeus Bowden, SEI & PDIC Executive Director.

Mr. Reza Bahrehmand, our newest SEI and CMAS Instructor, teaches in Texas, United States, (USA), Cyprus and Dubai, United Arab Emirates, (UAE).
Rescue protocols for divers

DRAM Rescue Course UPDATED

By Tom Leaird, SEI & PDIC CEO

A brief history:
As the American Heart Association (AHA) announced changes in CPR protocols based on well-founded research during the late 1990s (and again during 2010), I led a team with YMCA Scuba to question the way we directed Scuba Lifesaving Accident Management (SLAM) students to handle unconscious divers. The protocols we were using dated back to the initiation of the YMCA SLAM program in 1977 which became our industry’s first rescue program. I carried our questions to Dan Orr, then the CEO of Divers Alert Network (DAN) and together we attempted to organize a study that would result in a better way to rescue divers based on the latest information available.

The staff at DAN went to the Underwater Hyperbaric Medical Society (UHMS) as well as members of their own organization to locate persons that had record of research that would provide us with the answers to our questions. Everybody contacted had good information but those were based on previous standards and did not take the new evolving AHA procedures into account. We decided to make no changes until sufficient data was available.

Our challenges:
The original YMCA SLAM protocol was to provide rescue breaths while towing the unconscious diver to a stable platform. We continued that concept as we upgraded and created the Diver Rescue Accident Management (DRAM) program during 2009. Checking for a pulse has been found to be virtually impossible with hoods, gloves and moving water. The performance of rescue breaths, even with the advantage of BCD inflation, was very difficult at best. Pocket masks were suggested but few divers carry a pocket mask in their BCD pocket, and masks must be serviced after every dive and cannot contain a filter. Two other concerns we had were: 1) How much oxygen remains in a diver’s body when suffering from one of several accident possibilities? 2) How does a rescuer differentiate between a heart attack, an arterial gas embolism, or other cause? These brought us to the question we wanted answered: “What is the best way to rescue a non-responsive diver on the surface in deep water away from boat or shore.”

Finally during 2013, the UHMS and DAN settled on a protocol based on the latest AHA standards and the best information available. The latest AHA standards emphasize chest compressions over breaths when providing CPR to non-responsive persons. A new protocol for dive rescue was announced in Alert Diver Magazine in the fall edition of 2013 (http://www.alertdiver.com/Rescue-of-an-Unconscious-Diver). We are building on these principles for this article as well as general changes in the DRAM Rescue course and related programs.

DRAM to the rescue:
Using this information, we have made several changes in our DRAM program, hopefully to enhance the performance of diver rescue and perhaps save additional lives as a result. We have published an addendum to the DRAM manual that can be used for those with the current edition. Future editions will include these changes. The acronym CARE (Cognizance Assessment Rescue and Evacuation) that forms the four major areas of DRAM has not changed. Most of the modifications appear in the Rescue portion and the concentration is on the rescue of a “Surface Unconscious Diver” and a “Submerged Unconscious Diver”. New decision charts have been created to help understand and teach these changes. (See pages 5 - 8 and click on each image to review decision charts on the seidiving.org website.)

continued on page 4
The bottom line: We have tested transport times while giving breaths, against towing a diver without providing breaths. Seconds count when rescuing an unconscious non-breathing diver who may or may not be in cardiac arrest. Unable to make a definitive evaluation in the water, the rescuer will now be directed to provide two initial rescue breaths as soon as and if possible, then make a judgment call: can a stable platform be reached in less than five minutes, or more than five minutes and, if possible, deliver breaths during tow. If less than five minutes, tow the diver. If more than five minutes, provide one minute of rescue breaths and then tow the diver. Most of the other portions of our protocols remain intact: positive buoyancy, calling for help, etc. You will also see that there are some minor changes to the handling of the submerged unconscious diver from the bottom to arriving on the surface.

Reading through each of the four modified decision charts should help explain all of these changes and how they apply to teaching the DRAM program in the future. These changes are effective immediately. The DRAM PowerPoint presentation and DRAM Instructor Guide have been revised and are now available for distribution. Please contact our associates in the SEI-PDIC offices for questions. I would suggest providing recent DRAM graduates with this new information to enhance their education.

A special thanks to DAN and the UHMS for following up with our requests for a better way to rescue disabled divers. As additional changes occur in the future, both in CPR protocols and other research, we will count on the guidance of these two organizations for assistance with additional updates.

OPEN WATER DIVER STANDARDS
The Open Water Diver Standards have been updated to reflect the new DRAM Rescue protocols. The following highlighted text is new:

**POOL OR CONFINED WATER TRAINING**

3. SKIN AND SCUBA SKILLS – pg 18 Part II, S&P s. Rescue breathing to a simulated non-breathing diver

4. POOL SKILL EVALUATIONS – pg 20 Part II, S&P

**SKILL 5: DIVER EMERGENCY HANDLING.**

**TASK 1: Surface struggling diver.**
A distressed, uncooperative scuba diver is on the surface. Demonstrate the ability to stabilize the distressed diver on the surface by encouraging self-rescue, maintaining safe surface distance, advising the diver of intent, making fully submerged frontal approach and fully remove the diver’s weight system and inflate the diver’s buoyancy compensating device before surfacing. Insure rescuer surfaces beyond the reach of the distressed diver and continues to encourage diver until he/she becomes calm. Students reverse roles and repeat this portion of the exercise.

**TASK 2: Submerged unconscious diver.**
A student playing the part of an unconscious diver is positioned at the bottom of the pool using scuba. The rescuer, also using scuba, swims to the disabled diver, achieves neutral buoyancy, ascends with the disabled diver to the surface, makes this diver positively buoyant and while at the surface demonstrates the ability to administer mouth-to-mouth rescue breathing in place. Then tow the simulated non-breathing diver at least 25 yards prior to simulating the removal of the victim from the pool. Gear may be removed during the towing of the disabled diver or at the extraction point.

Rationale: Basic rescue skills should be introduced to all scuba divers. Being an outdoor, physical recreation sport, scuba diving holds the potential for participants to become injured, ill, or otherwise incapacitated and require assistance. Therefore, exposure to basic rescue skills is necessary to increase the diver’s confidence and safety while diving. **Students should be informed that if during an actual non-breathing incident, two initial breaths should occur prior to the tow, and, if possible, deliver breaths during tow if the tow time will be less than five minutes. If more than five minutes, one-minute of breaths should occur then make the tow to a stable platform where full CPR can occur.**
**Decision Chart: Submerged Conscious Diver**

1. **Diver appears distressed**
   - **Is diver highly stressed?**
     - **Yes**
       - Attempt to calm diver
     - **No**
       - Determine if problem exists
   - **Problem solved?**
     - **Yes**
       - Continue dive or surface
     - **No**
       - Initiate ascent and control buoyancy
       - Safety stop if possible
       - Provide surface support and tow if necessary
Decision Chart: Submerged Unconscious Diver

Diver appears motionless

Make physical and eye contact

Is diver responsive?

- Yes: Determine if problem exists
  - No: Continue or end dive
  - Yes: Solve underwater if possible

Regulator in mouth?

- No: Maintain in mouth
  - Yes: Currently convulsing?
    - No: Head in neutral position, Ascend <30 ft/ min, Control buoyancy
      - No: Wait for convulsing to finish
      - Yes: At surface turn face up, Establish positive buoyancy, Call for HELP
        - Yes: Give 2 rescue breaths, Assess surface support availability
          - Yes: Tow victim to nearest surface support and if possible, deliver breaths during tow
          - No: Remain in place giving rescue breaths for 1 min, then tow to nearest surface

Surface support <5 min. away?
Decision Chart: Surface Conscious Diver

Observe distressed diver and determine distance

Close to boat/shore?

Yes

Command self-rescue

No

Alert others for assistance

Enter water, swim within 20' of diver, and command self-rescue

Diver responds?

Yes

Makes self buoyant & swims to boat/shore

No

Diver responds?

Yes

Submerge and approach victim, contact (side or back)

No

Surface beside or behind, Make buoyant, Communicate and calm victim

Tow victim to nearest surface support
Decision Chart: Surface Unconscious Diver

Diver appears unresponsive

Rescuer enters water and approachers diver

Is diver responsive?

Yes

Determine Problem

Is diver disabled?

Yes

Continue dive or exit water

No

Tow victim to nearest surface support, and if possible, deliver breaths during tow

No

Call for HELP

Turn face up & confirm positive buoyancy
Open airway & assess breathing

Diver breathing?

Yes

Give 2 rescue breaths, Assess surface support availability

Surface support <5 min. away?

Yes

Remain in place giving rescue breaths for 1 min, then tow to nearest surface support

No

No

No
Children Divers More Prone to Hypothermia and Brachycardia

International SportMed Journal reports the findings of a German study on the body temperature and heart rate on young divers. Adult divers and youth divers differ in several ways including body composition and size. The study found “significant heat loss and decline in heart rate occur commonly during SCUBA dives in children and adolescents”.

To read the complete article visit:

In 1991, a young teenage diver, diving in a quarry in Indiana experienced hypothermia which resulted in a diving incident and nearly a loss of life. This story was depicted on the television show Rescue 911 in 1996. The episode can be viewed (in 2 parts) at:
http://www.youtube.com/watch?v=UP5v14Th5h4
http://www.youtube.com/watch?v=0PZU37xQwKg

This study is finding further support for our standards in setting the minimum age for certification at age 12 and limiting junior divers to no more than 40 feet. With hypothermia, a young diver can begin to lose feeling in his or her extremities and experience perceptual narrowing – and because of age and inexperience, her or she may not even realize it.
Great Grand Turk

By Lyle Becker,
SEI & PDIC Instructor and Retired Master Chief

Have you considered a dive excursion on a cruise? If you would like a 5-star experience, consider diving in Grand Turk – clear water with up to 100 foot visibility, a wide range of sea life, and great topside support. On May 16, 2014, my wife and I docked in the small Caribbean island, Grand Turk, in the British Virgin Islands. Within walking distance of the cruise boat, we were at the dive shop and on board the dive boat. After receiving our gear, we were just 15 minutes away from our first dive spot called McDonald's Arch which is located in 70 feet of water and then drops off into the abyss. The second dive spot was a 50-foot reef where we encountered Warsaw groupers and turtles. If you have a chance to dive in the Caribbean, try a cruise excursion.
Reigniting Your Passion

Keeping the Flame Burning Bright

By Dan Carpenter, SEI & PDIC Instructor Trainer, North Carolina

I have been teaching scuba since 1984, and during that time my excitement for a dive, any dive, gets me roused. I have however seen many in a leadership role that appear to have lost the excitement of going diving. I am not sure if this loss of excitement about a dive is because diving is required of them, or diving is seen as just a way to make some money. I believe that as dive leaders, ours is a wonderful, exciting and awesome sport, so we must keep our passion for diving alive. If your passion is missing, if you dive only for the money or because it is expected of you, then why do it? Those leaders not displaying any excitement about the pending dive adventure are in “pain”.

Let me explain; my scuba mentor, Chuck LeBlanc, always said, “If it hurts, you’re doing it wrong”. I know now that the pain he was referring to was not just physical pain, but also of the mind. That mental pain or lack of excitement about a dive is clearly obvious to those around us, other leaders and our students. Those observing us must wonder why are you here diving if there is no fun or JOY in it for you? This mental condition must be healed, otherwise our students will inherit this “Ho Hum” attitude, or worse yet, never experience the passion, joy and excitement that once attracted us to this amazing sport. They may even quit diving altogether.

The thrill of diving was so powerful within us that a flame was ignited, a flame compelling us to become scuba leaders. We must, as leaders, keep our passion for diving alive so our students will catch that fire, like we did. We MUST do whatever is necessary to keep our flame burning bright. Perhaps a diving vacation, reading about diving adventures, finding a new buddy, talking to other divers, attending a dive exposition, browsing online dive adventures, taking a scuba class, looking at new gear, whatever it takes to sustain YOUR flame. If you are in leadership, you must dive for yourself often to keep your flame alive and well. If you have not completed a dive for yourself in the past six months, ask WHY? Then do whatever is necessary to get that flame white hot again. A white hot flame is contagious; it is a good infection to spread throughout our dive community.

I have been introduced, by those that know me, this way; “Just look at Dan, he will be ready, smiling, excited to be diving despite the... continued on page 12

Dan in Paradise Springs, Florida, taken by Judy Carpenter 2/20/13.
gray clouds and rain”. I never understood this introduction until recently. I have always been excited to dive, wherever the site may be. I am going to get into a body of water and submerge for twenty-plus minutes, so what if it’s raining! A few years ago I was asked by a student, “You have been diving for over thirty years, I am only twenty-four years old, why are you still doing it?” At that moment, I had never given any thought to, WHY am I still diving. I have dove in the North Atlantic off lobster boats, in Northern Lake Champlain, the St. Lawrence River wrecks, a forty-eight foot deep Olympic pool in Montreal Quebec, many of the freshwater caverns in Florida, with a group that discovered and raised a broken cannon from the Revolutionary War, dove in Chazy Lake 1600 feet above sea level, in the Saranac River behind my home with visibility of four feet and a maximum depth of twelve feet and I was always excited to do those dives. I was stumped! I am still excited to dive, even in a pool. Why was I still excited? I had never thought about it. I promised that student and the rest of the class an answer by the end of my lecture. When the lecture ended, I had not forgotten the question, though many in the class had. I addressed the class saying “I am diving and still excited to, as I have never gotten over the fascination of breathing underwater.” Being in such a foreign weightless environment with a host of awesome creatures perfectly suited for their environment is always a source of joy, wonder, and fulfillment for me! Seeing the unbridled excitement of a student after completing their first scuba dive experience, Wow! That reminds me of my first dive and the thrill I felt, then and now! That is the fuel that keeps my flame burning. What is your attraction to, and reward for diving?

So, ask yourself, “Am I excited to dive today?” If you lack excitement about sharing a diving adventure with those divers around you, look for the “WHY” you are not thrilled about this dive. Once you discover the answer to your why, the “fix” will become clear. Resolving the problem makes the “pain” disappear (like ditching weights). You will again display the contagious attitude of excitement, which is easily spread to others. You will ignite a fire in divers around you and in your students, as you should. Do whatever is necessary to keep your dive flame burning bright, refresh your passion often, it shows!
Edible Creations

One unique and creative way to instill interest in our underwater environment may just be the ticket for someone to become drawn to scuba diving. Nathan Shields, an epicurean artist has created some beautiful and delicious masterpieces depicting sharks; marine invertebrates and cephalopods including jellyfish and squid, along with an octopus, and an anemone; fish such as the clownfish and longnose butterfly fish; and shells. His medium of choice – pancakes. To view his masterpieces visit [http://www.saipancakes.com/](http://www.saipancakes.com/)

Who wouldn’t love pancakes or getting together for a social gathering with friends and others interested in diving – the camaraderie can build excitement and enjoyment.

For anyone interested in a unique one of a kind piece of artwork, you can commission a special pancake with proceeds going to the Pacific Marine Resources Institute [http://www.pacmares.com/home](http://www.pacmares.com/home)
Publications and Continuing Education

As a reminder, *Currents* is your publication. Submission to *Currents* counts toward continuing education credit, so we encourage participation in this journal. Articles or information can be sent to info@seidiving.org. We prefer Word documents for articles so text can be formatted to fit the layout. Pictures and figures should be referred to in the text and attached separately with proper labeling. Pictures should be sent as jpeg or pdf files at least 200 dpi. If you have any questions, please contact our office at 765.281.0600. Please scan all files and pictures for viruses before sending.

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