The British Sub-Aqua Club

BSAC

Dive with friends

National Diving Committee
Diving Incidents Report
2015

Compiled by

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Diving Safety and Incidents Advisors

Published by The British Sub-Aqua Club in the interests of diving safety

Introduction

This booklet contains the 2015 Diving Incidents Report, produced by British Sub-Aqua Club (BSAC) in the interest of promoting diving safety. It is important to note that it contains details of UK sports diving incidents occurring to divers of all affiliations, plus incidents occurring worldwide involving BSAC members.

The 2015 'Incident Year' ran from 1st October 2014 to 30th September 2015.

Report Format

The majority of statistical information contained within this report is also shown in graphical form. Please note that all statistical information is produced from UK data only and does not include Overseas Incidents unless noted as 'All Incidents'.

The contents of this report are split into an overview of the year, and then the details of nine incident categories plus some historical analyses. The various sections can be found as shown below:-

i)	**Overview**	**Page 1**
ii)	**Fatalities**	**Page 6**
iii)	**Decompression Incidents**	**Page 9**
iv)	**Injury / illness**	**Page 17**
v)	**Boating & Surface Incidents**	**Page 23**
vi)	**Ascent Incidents**	**Page 27**
vii)	**Technique Incidents**	**Page 32**
viii)	**Equipment Incidents**	**Page 36**
ix)	**Miscellaneous Incidents**	**Page 39**
x)	**Overseas Incidents**	**Page 40**
xi)	**Numerical & Statistical Analyses**	**Page 45**
xii)	**List of Abbreviations**	**Page 47**

Within each category the incidents are listed in the order of their occurrence, not necessarily that of Incident Reference. They are laid out in the following form:

MONTH/YEAR OF INCIDENT *INCIDENT REF.*
Brief Narrative of Incident.....
.....

The nature of many diving incidents is such that there is usually more than one cause or effect. Where this is the case the incident has been classified under the more appropriate cause or effect. For instance an incident involving a fast ascent, causing decompression illness, will be classified under 'Decompression Incidents'.

Brian Cumming, Clare Peddie
BSAC Diving Safety and Incidents Advisors,
November 2015

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and, in particular, all of those divers and other sources who have taken the trouble to complete Incident Reports and share their learning experience with others.

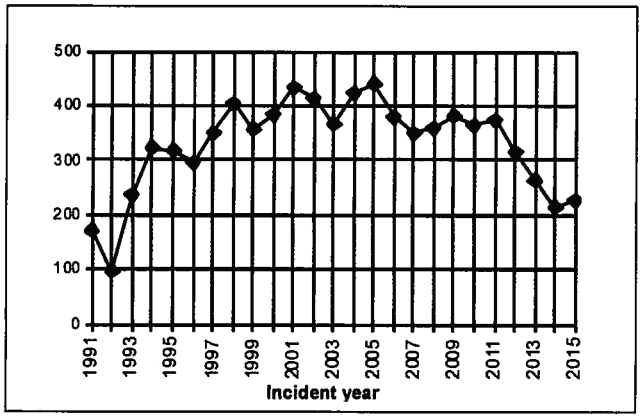
Overview

2015 has seen 226 UK diving incidents reported. This is only slightly more than the 216 reported in 2014. In the years 2006 to 2011 the number of incidents reported had been fairly consistent at around 370. From 2011 to 2014, the number of reported incidents declined by approximately 60 reports per incident reporting year and now this decline may have plateaued.

The decline of incidents seen in recent years could be explained by less diving, less incidents or less reporting, or a combination of any of these factors. For reasons explained later in this report, we believe that this decline is unlikely to be due to an overall decline in the reporting of incidents.

This year, in our report, there are continued trends that indicate that there have been further improvements to diver safety with respect to the number of decompression incidents. In addition, we report on the analysis of over 4,000 dives to investigate the risk of diver separation when diving in groups of three or more. We also highlight reports of fast ascents associated with the loss of weight pouches from harness weightbelts or integrated BCDs.

Number of reported incidents



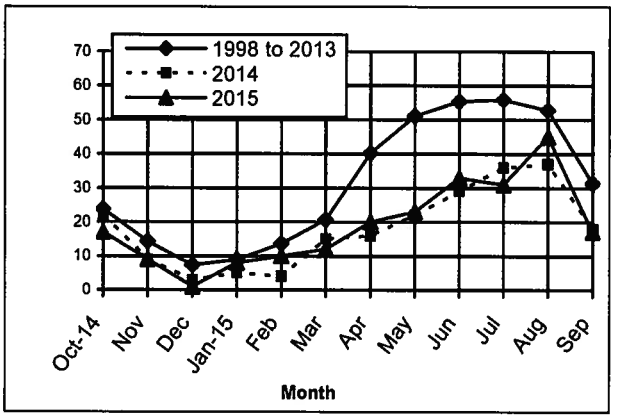
Incidents by month

Between 1998 and 2013, the distribution of incidents by month follows a sinusoidal form with the lowest number of cases in December and January, which rises initially in March or April depending on when Easter falls and then to a peak in June and July.

In 2014 and 2015, the expected rise in incidents during spring and early summer (April to July) is absent. To illustrate this, the following chart shows the average number of incidents reported per month in the years from 1998 to 2013 to provide a view of the 'normal' picture in comparison to the number of incidents reported in 2014 and 2015

In 2014, we proposed that it was possible that divers are being more careful at the beginning of the diving season and heeding the advice given over many years to start slowly after the winter break. The reoccurrence of a similar pattern in 2015 with significantly lower incidents in April to July inclusive provides more evidence that the pattern of occurrence of incidents is significantly changing and further analysis is required to determine what are the key influencing features behind this changing trend.

Incidents by month

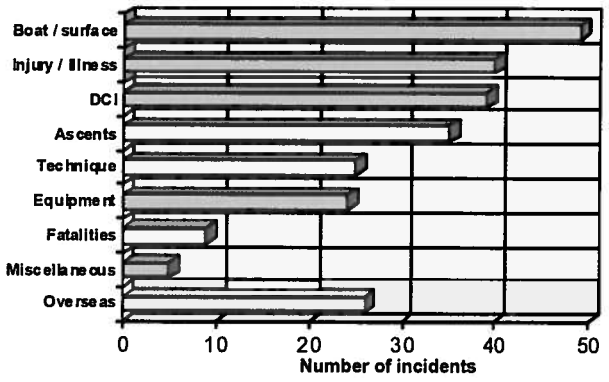


Furthermore, the fall in incident numbers is confined largely to the months of April through July, which indicates that a decline in incident reporting is unlikely to be the root cause of the overall decrease in incidents.
It is to be expected that the total for September is lower than reality as a result of the time that it takes for reports to reach us. The cut-off period is now extremely tight because of the timing of the BSAC Diving Conference and this partially explains the drop in August and September. Reports received post cut-off are included in the database for future research purposes but they are not included in the annual report.

Incidents by category

The incident database assigns all incidents into one of nine major categories, and the chart shows the distribution of the 2015 incidents into those categories.

Categorisation of the year's incidents



Incidents involving 'Boating and Surface' events had been falling progressively since the late 90s. This year 49 incidents were recorded which is an increase of ten on last year. This category mainly comprises of problems with boat engines (48%) (engine failure and out of fuel) and lost diver(s) (33%).

The next largest category is 'Illness and Injury' with 40 incidents reported. The bulk of this category is thought to be cases of DCI. These cases are often reported through the RNLI and their reports do not specifically record DCI, they often just state 'Diver illness'. Unfortunately, therefore it is often not possible to distinguish cases of DCI from other diver ailments unless the incident is reported by another mechanism which specifies the condition.

The distribution of incidents into the categories shows some interesting changes with respect to previous years. Cases of 'DCI' have been following a slight downward trend over the last ten years The number of incidents involving decompression illness (DCI) has fallen again in 2015 and we now report less than half of the number of DCI cases each year than in the period 2000-2010. The 39 DCI cases represents a fall of 16 incidents on last year.

'Ascents' is the fourth highest category and this involves incidents where divers have made an abnormal ascent but avoided DCI or other injury. This category peaked in 2006 and has been steadily falling since that time. In 2015, a similar number of 35 'Ascent' related incidents were reported. A lot of effort has been put into improving diver buoyancy control and these numbers (together with the reduction of cases of DCI) reflect the beneficial changes that have been made.

The last category to be mentioned specifically is 'Fatalities' and although the numbers are relatively small it is, of course, the most serious. This year saw 9 diver fatalities; the lowest number for over 20 years.

More analysis on these key incident categories is given later in the report.

Incident depths

The following chart shows the maximum depth of the dives during which incidents took place, categorised into depth range groupings.
The pattern of depths in the 0m to 50m range is very similar to that normally seen and reflects the amount of diving that takes place in these depth ranges. Incidents involving dives deeper than 50 m range are usually more serious and contain a disproportionate number of fatalities. This year there were four reported incidents involving dives to depths greater than 50m and unfortunately one of them resulted in a fatality albeit from a medical event.

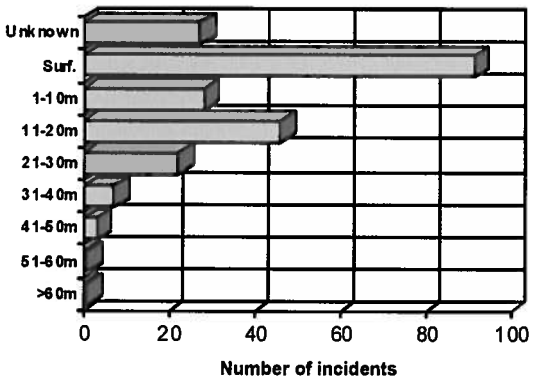
Maximum depth of dive involving an incident

BSAC advises that no air dive should be deeper than 50m, and that dives to 50m should only be conducted by divers who are appropriately trained and qualified.

The recommended limit for divers trained to Sports Diver standard is 35m and then only when they have received appropriate training for diving at this depth.
BSAC recommends that helium mixtures should be considered as an option for depths deeper than 40m and that mixed gas diving should be to a maximum depth of 100m. Mixed gas dives should only be conducted when the diver holds a recognised qualification to conduct such dives.
See the BSAC website for more details of these and other diving depth limit recommendations.

The next chart shows the depths at which incidents started.

Depth at which an incident started

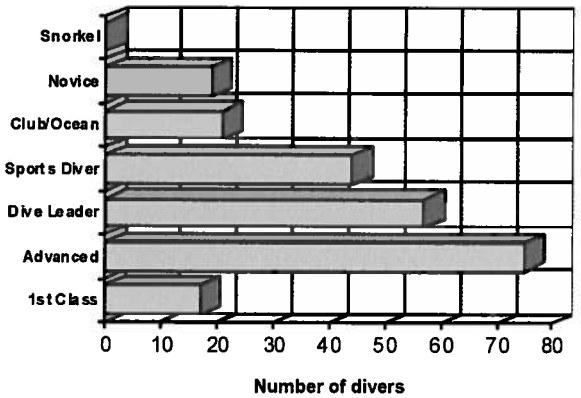


Inevitably these data are biased towards the shallower depths, when compared with the maximum depth of the dive, since many incidents start during the ascent or at the surface. Critical among these are the DCI cases where, almost always, symptoms present when the casualty is out of the water. This partially explains the large occurrence of 'Surface' cases as this includes divers with DCI who have left the water. Other surface incidents involve boats and boating incidents and divers who are lost but on the surface. The depth profiles are consistent with previous years.

Diver qualifications

The next two charts show the qualification of those BSAC members who were involved in reported incidents.
The first looks at the diver qualification.

Qualification of the divers involved in incidents



These data are in line with the normal pattern of previous years and are thought to reflect the number of active divers in these qualification grades.

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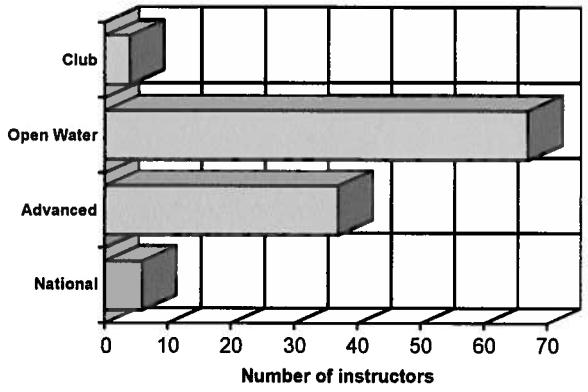
The next chart shows an analysis of incident by instructor qualification and again it is consistent with previous years.

Qualification of instructors involved in incidents

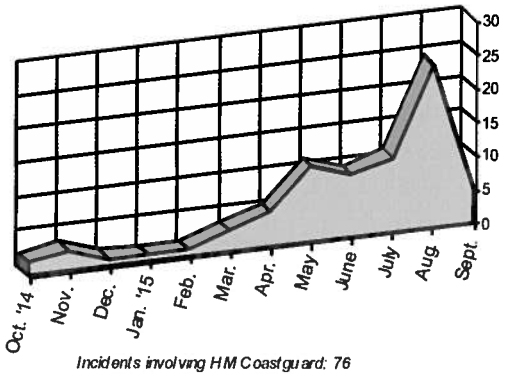


In 2014, there were no Club Instructors featured in the incident report and the plan was to drop this category from the incident report, however four instructors of this category were involved in incidents this year. The involvement of each grade of instructor in incidents is probably a reflection of both the number of instructors with that qualification and the activity levels of these instructors.

Divers' use of the Emergency Services

Divers' use of the emergency services shows a monthly distribution aligned to the distribution of all incidents, and is clearly correlated with the number of dives that are taking place.

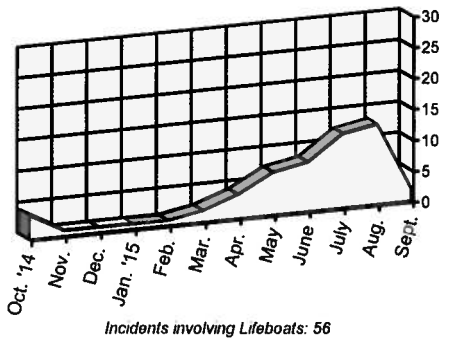
Incidents involving the UK Coastguard Agency - Monthly breakdown



Incidents involving HM Coastguard: 76

The total number of incidents involving the Coastguard was 76 and there were 56 incidents reported that involved the RNLI. The RNLI's main support to divers involves assistance with disabled boats, searching for missing divers and the recovery of divers with DCI. Both the RNLI and the Coastguard data confirm the absence of the significant rise in incidents in 2015 that was seen in April to July between 1998 and 2013.

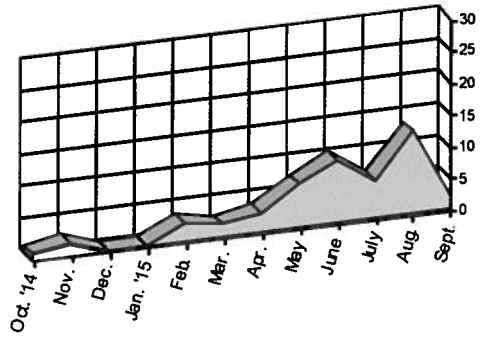
Divers' use of RNLI facilities by month



Incidents involving Lifeboats: 56

In 2015, 49 incidents involved the use of helicopters. This is again lower than normal and it reflects the overall reduction in reported incidents between April and July inclusive.
In diving related incidents, helicopters are mainly tasked to support searches for missing divers and to transport divers with DCI to recompression facilities.

Divers' use of SAR helicopters by month



Incidents involving helicopters: 49

Fatalities

9 fatal incidents occurred in the UK during the 2015 incident year. This is the lowest number for over 20 years (in 1983 there were 8 recorded fatalities).

3 of the 2015 fatalities were BSAC members. The previous ten year average for BSAC fatalities in the UK is 6.2 fatalities per year.

6 of the year's fatalities were non-BSAC members. The previous ten year average for this group is 8.3.

Key factors associated with the 2015 fatalities can be summarised as follows:-

- The nine fatalities in 2015 involved divers aged between 44 and 59 with an average age of 52.
- Five of these cases involved the casualty falling unconscious under the water. In all these incidents, where a casualty falls unconscious underwater, the rescue becomes much more problematic.
- Three confirmed cases involved divers who suffered a 'non-diving' related medical incident (for example a heart attack) whilst in the water. There are two additional cases where it seems very likely that the diver suffered a 'medical event' whilst underwater, although evidence to substantiate this assumption is not currently available.
- Five cases involved divers diving in a group of three. Diving in groups of three (or more) brings additional

complexity to a dive and can generate problems that don't exist with pair diving. However, it is not clear whether trio diving directly contributed to these fatalities. BSAC recognises that, at times, it is necessary to dive in a group of three.
- Two cases involved a rapid ascent whilst carrying out an alternate source ascent. These fast ascents may not have directly contributed to the fatality.
- Four cases involved a separation of some kind and three of these separations happened in cases where more than two divers were diving together.
- There was one case of a solo diver, diving on a rebreather, where insufficient information is available to understand the cause of the incident.

Often multiple causes are involved in an incident. With a number of these fatal incidents there is currently insufficient information available to be clear about the exact chain of events and specific root causes. Often new information comes to light (from coroners' inquests for example) after the publication of this annual report. Such information is added to the incident database for future research purposes.

Decompression incidents

The BSAC database contains 39 reports of 'DCI' incidents in the 2015 incident year, some of which involved more than one casualty.
An analysis of the causal factors associated with the 39 incidents reported in 2015 indicates the following major features:-

21%	involved repeat diving
19%	involved rapid ascents
19%	involved diving to deeper than 30m
11%	involved missed decompression stops
7%	involved repeat diving with a reversed profile

Some cases involved more than one of these factors.
Given that 29% of DCI cases arose from dives reported to be within decompression limits, divers should be alert for DCI symptoms arising from any dive.

The number of reported DCI incidents is again markedly reduced when compared with the last six years. We know that we do not capture all of the DCI related incidents but the sample that is captured in this report is sufficiently large to develop a good understanding of the underlying causal factors.

As stated earlier, some of the 'Injury and Illness' incidents are also thought to be DCI related.

Boating and Surface incidents

The number of incidents involving boating and surface issues reported in 2015 was 49. The factors associated with these incidents are as follows:-

26	involved engine problems
18	involved lost diver(s)
9	involved boat problems
1	involved bad seamanship

Some cases involved more than one of these factors.

The number of lost divers (separated from their party but subsequently safely recovered) is the lowest since before 1998 and the average number of lost divers in the previous five years is 29.

Ascent related incidents

Ascent related incidents have been falling in recent years and this year there were 35 cases reported which is very slightly higher than the 32 cases reported last year. As in previous years the majority of these were 'rapid ascents'.

An analysis of these 'rapid ascents' (where the detail is known) is as follows:-

50%	Poor buoyancy control
36%	Equipment problems
23%	Panic / anxiety / rush for surface
23%	Weighting or weight related issues
9%	Delayed SMB problems
9%	Free flows
5%	Drysuit BCD control malfunction/mis-use
5%	Out of air / gas

In contrast to 2014, this year, there were six fast ascent incidents related to the loss of weights from a system other than a traditional weight belt. Five of these were related to the loss of weight pouches from a harness-type weight belt and one to the loss of weights placed in the pocket of a BCD. In a further case, involving the loss of an integrated weight pouch in a BCD, a fast ascent was avoided only by the use of a shotline to slow the ascent. All of the fast ascents resulted in the administration of oxygen and in two cases a visit to a hyperbaric chamber for assessment but no DCI was confirmed. In one case, it was reported that the loss of a weight pouch was due to the lack of effectiveness of older Velcro fastenings. Divers should inspect carefully the retention mechanism for weight harnesses or integrated weights for wear and tear and in addition ensure they do not exceed the manufacturer's guidelines for weight capacity.

The majority of the other fast ascents were due to over or under-weighting issues through equipment changes without making a subsequent buoyancy check, or unfamiliar drysuit controls or lack of practice.

Many DCI cases also are associated with a fast ascent; however even though they have been recorded under the 'DCI' heading the causal factors are the same, so the actual number of fast ascents recorded will be higher than these 35 cases. This year's DCI cases included 22 incidents where rapid ascents had also taken place.

Diver Separation Underwater

The BSAC Incidents database now has reports of 4463 incidents since 1997 involving divers underwater where the dive has involved either buddy pairs or dives in a group of three or more. Analysis of these 4463 dives shows that 26% of the dives in the database involving groups of three or more have resulted in a separation underwater. This value is statistically significantly higher than the 9% of the dives in the database involving buddy pairs that resulted in a separation. Recent advice, released by the BSAC, explains the extra care needed to avoid separation when diving in groups of three or more.

Conclusions

Key conclusions are:-
- The number of incidents reported this year is very slightly up on 2014.
- The monthly reporting pattern follows the unusual pattern identified last year with significantly lower numbers of incidents reported in April, May, June and July but similar numbers of incidents reported in the late summer and winter.
- The absence of the normal spring and early summer peak merits further analysis to understand the reduction in incidents at this time of year.
- The nine fatalities in the UK is the lowest reported for over 20 years.
- The number of fatalities of BSAC members is the lowest recorded since 1993.
- The number of fatalities of non-BSAC members is in line with the average of the previous 10 years.

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- The number of medical cases in divers aged over 50 continues to feature; the average age of the fatalities is 52.
- Diver age and related health and fitness issues are still featuring as critical factors in this and recent years' fatalities.
- Incidents of DCI continue to fall and we now report less than half of the number of DCI cases each year than in the period 2000-2010.
- In 2015, there was an increase in the reports of fast ascents associated with the loss of weight pouches or integrated weights.

Most of the incidents reported within this document could have been avoided had those involved followed a few basic principles of safe diving practice. BSAC publishes a booklet called 'Safe Diving' which summarises all the key elements of safe diving and is available to all, free of charge, from the BSAC website or through BSAC HQ.

Remember you can never have too much practice and the further you stay away from the limits of your own personal capabilities the more likely you are to continue to enjoy your diving.

Please browse through the details in this report and use them to learn from others' mistakes. They have had the courage and generosity to record their experiences for publication, the least that we can do is to use this information to avoid similar problems.

Finally, if you must have an incident please report it using our Incident Report form, available free via the BSAC website or from BSAC HQ.
As always, your anonymity is assured – great care is taken to preserve the confidentiality of any personal information recorded in BSAC Incident Reports.

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Fatalities

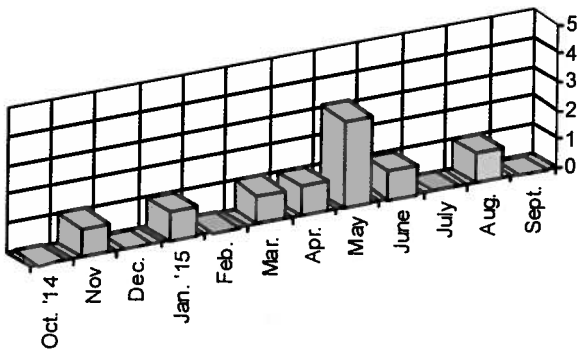
November 2014 15/014

A diver, reported to be using trimix 22/24, had been diving with her buddy and a third diver. Whilst ascending from a maximum depth of 68m after a reported dive time of 25 min, the diver had some difficulty with her buoyancy and sank. The third diver went to assist and helped them to start the ascent. The diver surfaced unconscious and was recovered from the water. Ambulance crews reported the diver had suffered a cardiac arrest and was pronounced dead at the scene. The buddy had breathing difficulties and was flown by helicopter to a recompression chamber for treatment. (Coastguard report).

January 2015 15/029

Six students and two instructors entered the water during the first day of a rescue training course which was in open water. They swam on the surface to a training platform. The visibility in the water was around 1 to 1.5m. The students had been briefed to descend to an approximate depth of5m in their buddy pairs. One instructor and four students went to a buoy at one end of the platform whilst the second instructor with two other students went to the opposite buoy on the same platform. The second instructor did not descend straight away because one student had difficulties with a leaking drysuit and this student swam on the surface to the shore and exited the water. The second instructor and the last student then descended down onto the platform. During a rescue scenario, in which the last student was rescuing the first instructor, the last student became separated and the first instructor came to the surface without the last student. Both instructors looked for bubbles from the surface and one instructor then descended back down onto the platform and searched the platform area. He then extended his search moving off the platform and found the casualty unresponsive on his back, face up with his fins slightly raised. He did not have his regulator in his mouth. The instructor brought the casualty to the surface and indicated to the surface support that this was a real emergency. As they were close to the exit he towed the victim to shore and the other divers assisted moving him up onto the slipway. CPR attempts were made but he did not recover. A post mortem indicated that a cardiac episode had occurred.

UK Fatalities - Monthly breakdown from October 2014 to September 2015 incl.



March 2015 15/040

On the second day of a deep diving course an instructor was conducting the first shore dive of the day with two students and a support diver. The group had descended to a maximum depth of 35m without incident and were ascending up a slope. At 20m the instructor stopped to demonstrate filling a small bottle with gas when his regulator free flowed. The instructor was provided with an alternate source and the ascent continued to around 5m when he suddenly made a rapid ascent to the surface. The rest of the group ascended immediately, with a dive time of 24 min, and found the instructor lying face down and unresponsive. He was removed from the water, CPR and oxygen were administered and an ambulance called but he did not recover.

April 2015 15/048

Two divers, one practising compass work, planned a shore dive to a wreck at 20m and to surface using a DSMB. The divers missed the wreck and when one of them indicated he had 80 bar left they agreed to ascend. It took a couple of attempts to inflate the DSMB and the diver with 80 bar had a free flow from his alternate source regulator. Attempts to resolve the free flow failed so the buddy gave his alternate source to the diver and they began to ascend from 20m. The ascent became increasingly fast and after trying to slow it down by dumping air from his BCD the buddy abandoned an attempt to complete a safety stop at 6m and the pair ascended to the surface with a dive time of 28 min. Once on the surface there was a certain amount of panic in trying to make themselves buoyant but the pair managed to stabilise themselves. The diver had lost the octopus regulator and, with apparent breathing difficulties, was asking for it so the buddy, thinking this might be related to the diver's asthma, tried to relocate his alternate source. The diver then suddenly launched himself towards the shore and concerned the situation was getting out of control the buddy gave the distress signal which alerted a rescue team who launched a boat. Turning back to the diver he found he had disappeared from the surface. The buddy searched for the diver, the rescue boat arrived and the buddy told them the diver was on the bottom. The buddy was recovered into the boat and returned to the shore where he was given oxygen. He was subsequently taken to hospital and received emergency treatment for hypothermia and shock but was released some hours later. The rescue boat had returned to the last known location of the missing diver and deployed search teams. The diver was located about 20 min later, was recovered and returned to the shore where ambulance and police teams took over and applied resuscitation. The diver was declared deceased at the scene.

May 2015 15/053

A group of four divers, in two buddy pairs, had dived from a hardboat to a wreck. Their dive profile was a 34m dive for 29 min bottom time on air and they then carried out decompression stops at 6m for 4 min and 4m for 24 min. They ascended using a DSMB and at 19m one of the divers in the group started to have breathing problems. The other three divers assisted with his buoyancy control on the decompression stops. As they ascended to the surface the diver became unconscious at around 2m. On the surface the group supported the diver and raised the alarm. The hardboat skipper immediately manoeuvred the boat alongside. Aboard the boat was another group of eight divers who had completed their dives ten minutes earlier. One of the divers from this group called for the boat's lift to be lowered and entered the

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water to assist with the recovery of the unconscious diver. Once the diver had been recovered aboard, the rescue diver directed the skipper to call the Coastguard and co-ordinated his own diving group who administered oxygen, CPR, isolated the diver's kit and collated all dive information during the journey back to shore. CPR had been applied for some twenty-five minutes during the journey and until an ambulance arrived. A doctor came aboard and pronounced the diver deceased. The cause of death was later confirmed as a heart attack.

May 2015 15/056

A group of three were diving in a lake. They followed a guide line from one underwater feature to another when one of the divers began to have problems with his buoyancy and became slightly inverted. One of his buddies signalled the diver to stop and he and the other buddy managed to push the diver's leg down. The diver started to pull himself along the line but became inverted again so one buddy signalled for all to abort the dive. The buddy pair lifted the inverted diver to the surface and quickly got the diver back into an upright position. Their dive time was 23 min at 7m. Once upright, the diver spat out his regulator and was gasping for air. The buddies immediately tried to get air into the diver's BCD but it would not inflate. The diver slid underwater but one buddy still had hold of him and was dragged down. On the bottom at about 7m and in now reduced visibility, the buddy noticed the diver did not have his regulator in so put his alternate air source regulator in the diver's mouth and tried to lift him to the surface. The diver was unresponsive and the buddy could not lift him. He tried to remove the diver's BCD but although he released the shoulder straps he could not release his weightbelt or the BCD's waist strap. The visibility was now nil and the buddy surfaced and shouted at the other buddy for help as the diver was still on the bottom with no air. The other buddy descended and located the diver while the first raised the alarm with the shore party to call the emergency services. The second buddy tried to inflate the diver's BCD and drysuit but that did not work so he inflated his own drysuit and BCD and took the diver to the surface. The buddy pair began a tow and gave rescue breaths but something was preventing them from moving. One of the buddies submerged under the diver and found that his equipment was hanging down beneath him caught on his DSMB strap, which was in his drysuit pocket, and the guide line was tangled with the BCD. The buddy released the diver from both, the diver's weightbelt was removed and the buddy pair continued the tow to shore. They were met and assisted by another diver who had swum out to them. Back on shore the diver was treated by paramedics and taken by air ambulance to hospital where he remained in a critical condition and died a week later.

May 2015 15/055

A group of eight divers were carrying out a day of diving from two RHIBs. The divers had been buddied according to equipment configuration and likely dive duration. One of these groups was a three, a trimix rebreather diver using 18/19 mix plus a bailout cylinder and two trimix open circuit divers using 12 lt cylinders with 18/35 mix and nitrox 50 decompression gas. Their first early morning dive, to achieve slack water, had been on a wreck at 29m for 50 min with decompression stops of 1 min at 21m and 5 min at 6m. After a surface interval of just over 5 hours, including 2 hours ashore for food and fluids, the two boats arrived on the second dive site, a wreck at approximately 40m. A shot was deployed with a 'waster' line to tie the shot to the wreck. The shot was checked to confirm it was not moving. The rebreather diver was assisted by others in his boat to kit up, including his bailout cylinder and two DSMBs and he carried out his pre-dive checks. With his two buddies also kitted up the group were ready to dive. The tide was still running on the site and the rebreather diver said he would swim down the shotline and send a small plastic fishing buoy on a short loop of cord back up the shotline to the surface to confirm the shot was tied onto the wreck. The rebreather diver looped the cord attached to the small buoy over his arm, was dropped on the shotline and descended. After approximately ten minutes the small buoy was not sighted and it was concluded by those in the boats that either they had missed seeing it due to its small size or that the rebreather diver had been unable to tie the shot into the wreck. It was decided that the rebreather diver's two buddies go in but avoid putting too much load on the shotline during their descent. They entered the water and there was evidently some current still running as one of the pair had to grab his buddy's hand and haul him to the shotline to begin their descent. The divers reported that the current had been quite strong as they had to pull themselves hand over hand and fin down the shotline. Between 5 and 10m they both saw a small number of medium sized bubbles rising ahead of them which they assumed was the rebreather diver as there were no other divers on the site. Between 15 and 30m the visibility was poor and at 30m it was extremely dark but visibility had improved to around 3 to 4m. When they reached the shot they found it was not tied into the wreck but lodged in a rocky outcrop at 43m. The pair carried out a 360 degree scan which confirmed the rebreather diver was not waiting so they swam into the current to the wreck which was a few metres away. They swam along the wreck for ten minutes and then turned back towards the shot but were unable to locate it and deployed a DSMB. They did not see any other divers during this time. The pair ascended, completed their decompression stops and surfaced. In the meantime another buddy pair, diving on air, had also surfaced from their dive. They had found the shot in the same position as the first pair but missed the wreck and after searching for fifteen minutes they had ascended using a DSMB. During their dive they had not seen any other divers. At this stage no one was overly concerned as it was not unusual for the rebreather diver to have continued his dive in these circumstances and, with a longer bottom time than the open circuit divers, they fully expected his DSMB to shortly arrive at the surface. The remaining trio of divers, using air, began to kit up whilst the two boats circled the site looking for the rebreather diver's DSMB. It was now an hour after the rebreather diver had descended and the divers on the surface had become increasingly uneasy. It was agreed between the two boats that no further divers should enter the water and the trio were stood down while a thorough surface search was carried out to see if the rebreather diver's DSMB had been missed or he had surfaced without one. One boat remained close to the buoy and the other started travelling further downstream. After another fifteen minutes it was decided to call the Coastguard and report the diver overdue. This was taken as a 'Pan Pan' and the Coastguard advised assistance would be deployed. Twenty minutes later one of the trio of air divers who had been stood down, decided to dive and look for the rebreather diver in the vicinity of the shot whilst there was still some slack water. Another diver in his trio agreed to dive with him and as they descended they had felt the shot dragging along the bottom. They reported the visibility was poor below 25m and when they reached the shot a cloud of silt marked its movement but they could not see any drag marks. They began a circular search reeling out from the shot and used their torches looking for the wreck and rebreather diver. When their agreed no stop time was reached the divers returned to the shot, ascended and were recovered. Whilst they were underwater the two dive boats had continued widening their search and had been in touch with the Coastguard again who had upgraded the alert to a 'Mayday'. Shortly after two lifeboats arrived, a helicopter had been scrambled and they began an extensive surface search. The two dive boats remained on site but as they were not equipped for night running they returned to port before darkness fell. The emergency services continued their search operation covering around ten nautical miles before being stood down later that evening and a decision was taken not to resume the search the following day. Police

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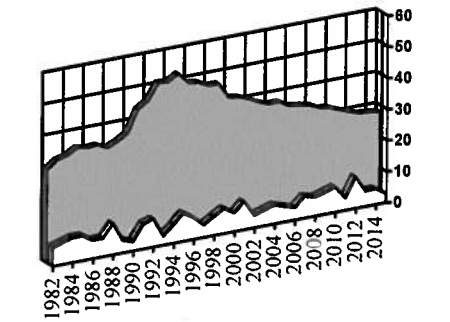
confirmed the body of the missing diver was recovered near the wreck site four weeks later.

June 2015 15/144

The Coastguard received a call from a charter boat that they had a diver with central chest pains who had surfaced from a second dive to 20m for 21 min. The diver had carried out an earlier dive to 20m for 40 min and had dived nitrox 32 for both dives. Following a telephone consultation with a hyperbaric chamber's duty doctor, the diver was evacuated by helicopter, transferred to an ambulance, taken to hospital and died some days later. The diver's buddy was reported to be well. (Coastguard & RNLI reports).

BSAC Fatalities against membership 1982-2015 (UK fatalities only)



August 2015 15/110

A group of divers carried out a wreck dive to 32m from a RHIB. As a diver and his buddy, diving on a twin-set, prepared to dive it was noticed that one of the buddy's regulators was leaking. On checking the buddy's equipment it was found that the contents gauge hose was loose. This was tightened as well as all other hoses checked. The divers descended the RHIB's anchor line to the wreck with the divers exchanging 'OK' signals several times. As the visibility was low and as discussed during their dive brief, the diver attached a reel to the anchor line so they could return to it for their ascent. The divers arrived back at the anchor line, unclipped the reel and ascended. The diver had checked his computer which showed a 2 min stop at 3m and noticed that his buddy had switched her regulators. They made a steady ascent but at 17m the buddy suddenly grabbed the diver's BCD chest strap but looked 'OK'. To reassure the buddy, the diver held her by the shoulder and he ascended backwards up the line so he could see her all the time and they exchanged 'OK' signals. At around 4m the diver moved the buddy's hand from his chest strap and onto the anchor line while he checked his computer, his decompression stop requirement had cleared. The buddy gave what the diver understood to be an 'out of air' signal so the diver gave her second regulator to her. The diver checked his buddy's contents gauges which showed 150 bar in one and 50 bar in the other and he had handed her the regulator for the 150 bar cylinder. The buddy was still signalling so the diver gave her his own spare regulator which she took. The pair had now ascended to 3m and the diver, holding onto the buddy, took her to the surface where he made them both buoyant. Their dive time was around 25 min to a maximum depth of 32m. The buddy still had the regulator in her mouth but was now unresponsive and not breathing. The diver was assisted to recover the buddy aboard the RHIB and CPR was immediately started. The Coastguard was alerted and a rescue helicopter was sent to the scene together with a lifeboat. The diver was airlifted to hospital but pronounced dead on arrival. The diver's buddy, following radio medical advice from a dive doctor, was evacuated by the lifeboat to the shore and airlifted to a hyperbaric chamber. It was reported he received recompression treatment as a precaution.

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Decompression Incidents

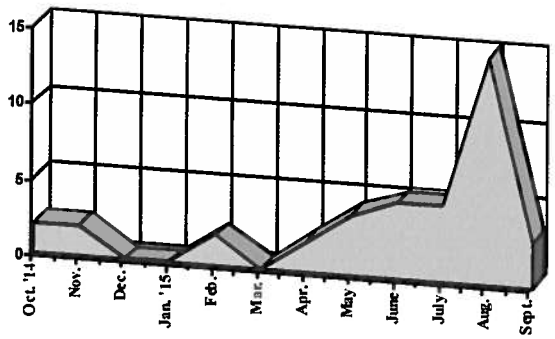
October 2014 15/011

A trimix rebreather diver had completed a boat dive on a wreck at 54m for 88 min which included 1 min stops at 27m, 24m and 21m; a 2 min stop at 18m; a 4 min stop at 15m; a 5 min stop at 12m; an 8 min stop at 9m; a 12 min stop at 6m and a 16 min stop at 4m. Following this only dive of the day and around four hours after leaving the water the diver was driving home when he experienced 'tingling and pins and needles' in the fingers of his left hand. The diver was treated at a recompression chamber and his symptoms were significantly reduced by the time the treatment had been completed.

October 2014 15/010

A diver had completed four boat dives with his buddy over a weekend. Diving nitrox 36, the diver's last dive had been on a wreck at 30m for 57 min including stops for 5 min at 9m and 10 min at 3m. Three hours after surfacing he became unwell with pain in his shoulders, elbows and neck which continued to get worse. The diver called a hyperbaric chamber and was advised to attend. After examination the diver was diagnosed and treated for DCI. It was also confirmed he was suffering from a virus. The diver's buddy had no symptoms following the weekend.

Decompression incidents by month



November 2014 15/184

A student had carried out two shore dives. The first was to 10m for 46 min with a stop at 6m for 3 min followed by a surface interval of 90 min and the second dive was to 13m for 45 min with a stop at 6m for 3 min. The student returned home but about 5 hours after completing his last dive he felt ill and sought medical advice. It was recommended that he attend a hyperbaric chamber. The student was examined and with suspected DCI was given recompression treatment. The student was discharged the following day. He received a follow up call from the chamber and given the all clear but advised not to dive for a month and to have a new diving medical.

February 2015 15/050

A group of four divers carried out a shore dive together in two buddy pairs. They had planned a no stop dive to 35m including a 3 min safety stop. The divers descended a shotline to 34m and then headed towards a wall ascending to a 27m plateau. They slowly ascended to 10m and started the final part of their ascent parallel to the wall. At 5m the divers carried out their 3 min safety stop, which was a bit crowded with all the divers on the stop. Halfway through this stop one of the divers, diving nitrox 23 as air, felt dizzy. He and his buddy signalled to each other that their computers were clear and they ascended to about 2m when the dizzy diver appeared to hesitate. His buddy was about to give an 'OK' signal when he signalled 'Up'. Back on the surface, with a dive time of 33 min, the buddy asked the diver if he was 'OK'. He appeared to be a bit disorientated but responded by saying he felt dizzy. The buddy grabbed hold of his cylinder handle and started to tow him toward some steps to exit the water. Near the steps the diver began to vomit. As the buddy turned him around to try and get him out of the water, the diver was struggling to breathe and became unconscious; the buddy shouted for help. The other buddy pair had just exited the water and they, together with a group of doctors and paramedics who had been working nearby with a film crew, recovered the diver ashore. The diver was unconscious but breathing and his treatment, including oxygen administration, was taken over by the paramedics. The diver was transferred to an ambulance and an air ambulance arrived. The diver regained consciousness and it was decided by the doctor on the helicopter that the diver should be taken to hospital by the land ambulance. The diver was then transferred to a hyperbaric chamber where a doctor diagnosed arterial gas embolism and brain and spinal cord DCI. It was also the doctor's view that it was possible the diver had a PFO. The diver remained at the chamber for three weeks and underwent eleven sessions of recompression treatment and then spent another week in hospital. The diver made slow, gradual improvements during the course of his treatment. He also underwent intensive physiotherapy and was due for further spinal rehabilitation as the most essential part of his recovery.

February 2015 15/273

Two divers reported that they had had difficulties at 22m which resulted in a rapid ascent. They called for help at the surface and the rescue boat was deployed to assist them back to the shore. They were assessed at the centre and, as they complained of tingling, numbness and anxiety, the diving chamber was called. The chamber advised not to administer oxygen or fluids as they wanted to assess the divers. Both divers were airlifted to the chamber. One of the divers was confirmed to have suffered DCI and received treatment.

April 2015 15/139

The Coastguard was contacted by a dive charter boat to report they had a diver aboard who was showing symptoms of DCI having made a rapid ascent from 54m. The diver was on oxygen and the boat still had six divers in the water. Medical advice was sought from a hyperbaric chamber and their advice suggested immediate evacuation. The diver was airlifted to shore and transferred by ambulance to the recompression chamber. (Coastguard report).

April 2015 15/140

The Coastguard received a call from a dive boat which reported a diver aboard presenting DCI symptoms. The diver had dived to 29m for 37 min but had made a rapid ascent. The diver had been put on oxygen. Medical advice suggested immediate evacuation and the diver was airlifted to shore and taken by ambulance to a hyperbaric facility by ambulance. (Coastguard report).

May 2015 15/124

Three divers had booked places on a hardboat to dive a wreck. On the boat, another diver asked for someone to dive with him as he was on own and one of the three divers agreed to be his buddy. The buddy, who was also an instructor, checked out the

diver's qualifications and recent experience. The diver was diving air in a 12 lt twin-set with side slung independent cylinders and all his equipment looked fairly new. The pair discussed the dive plan and the diver confirmed he was happy to do the dive to 30m including decompression stops. He altered his computer setting for decompression at 3m instead of 6m so he could match his buddy's planned stops at 3m. The buddy was carrying 12 lt independent twin-set cylinders of air with a 3 lt cylinder of nitrox 50 for decompression. The divers descended the shotline with the diver appearing to have some difficulty at first but they carried out their dive on the wreck at 29m. At the pre-arranged time of 35 min the pair prepared to ascend. The diver had some problems as he deployed his DSMB when his reel initially jammed. The pivot screw on the DSMB's release trigger had loosened and the line had caught between the back plate and the reel. The diver declined assistance, freed the line and deployed the buoy without losing buoyancy control but the line seemed to snag on something beyond visibility limits. The buddy wondered if the DSMB line had somehow caught on the diver. The buddy started to ascend as the diver reeled in the line but he could not see him in the poor visibility. The buddy soon realised that the line, which should have descended back down to the diver, was now above him. The buddy thought the diver must have ascended faster than him but had paid out the line as he had not been pulled upwards. He guessed the diver must have made a fast ascent and decided he would be looked after on the surface so continued his planned ascent. As he approached 10m he discovered the line to the buoy had been cut and, as he wound it round his hand, he found that the other end had also been cut. The buddy deployed his own DSMB, ascended to complete his 14 min of decompression stops and surfaced with a dive time of 57 min to a maximum depth of 29m. When he returned to the boat he found the diver lying on his back and on oxygen. The skipper had already called the Coastguard informing them that the diver had surfaced missing all his decompression stops. His dive time was around 40 min to a maximum depth of 29m. The buddy checked the diver and carried out basic neurological function tests and the only symptom displayed was some 'tingling' in the diver's fingers. He gave the diver water and helped him to de-kit. The dive boat waited fifty minutes out at sea while the Coastguard, dealing with simultaneous incidents along the coast, decided to action a helicopter to evacuate the diver as this would be quicker than landing the diver ashore and trying to get an ambulance through weekend tourist traffic to hospital. The boat had started to return to shore when the helicopter arrived and evacuated the diver to a hyperbaric chamber. The diver spent seven and a half hours receiving recompression treatment and fully recovered.

May 2015 15/066

Two divers had completed separate morning boat dives, one of them to 29m for 31 min with a 4 hour 15 min surface interval and the other diver to 29m for 33 min with a four hour surface interval. Buddied together for the second dive on a wreck, they dived to 27m but had not discussed decompression options or a dive plan. With his computer indicating 2 min of decompression stops one of the divers initiated the ascent. The diver inflated his DSMB but the reel jammed and unable to resolve the problem the diver let it go. He started to take out his spare DSMB but his buddy had started deployment of her own. The buddy did not get sufficient air into the DSMB for it to rise and let it go so the diver retrieved it and added more air so it would surface. The pair's ascent was slow, stopping a couple of times, and they took approximately 5 min to reach 3m. During the ascent the diver had noticed the buddy was turning the reel's spool and not using the spool's handle to wind in the DSMB line. At 3m the diver had 4 min of decompression to complete but did not know his buddy's decompression requirement. The diver then noticed there was excess DSMB line in the water and, positioned down-current of his buddy, it was going over his head and back. Uncomfortable with this the diver decided to try and get up-current of his buddy to avoid the excess line but whilst doing so he lost focus on his depth and ascended to the surface with a dive time of 41 min. The buddy surfaced just after the diver. He reported that she seemed panicked and immediately gave the dive boat an emergency signal. The divers then noticed there was a lot of floating line and the DSMB was several metres away. These were sorted out by the buddy as the boat made its way towards the divers. Aboard the boat the diver confirmed he had missed a few minutes of decompression but felt fine. The buddy said that she had missed 10 or 11 min of decompression and wasn't feeling well. Her computer had shut down so there was a problem checking the decompression information and once the other divers were back in the boat it was decided to put her on oxygen. Back on shore the divers spoke to a diving doctor who advised that the diver should also go on oxygen and he and his buddy should attend a hyperbaric facility for assessment. Both divers received recompression treatment for DCI.

May 2015 15/063

The diver and her three buddies were carrying out a shore dive to a maximum depth of 14m. At about 13m the diver reported that there was suddenly no air from her regulator and her alternate source regulator was not working either. The diver made a free ascent. When she reached the surface, after a total dive time of 28 min, she tried to breathe in but became unconscious. One of her buddies surfaced to find her with regulator out and on her back but with head submerged. He supported her head out of the water and tried to inflate her BCD but could not get it to inflate. Another diver surfaced to note her on the surface lying on her back supported by the first diver, frothing from nose and mouth and making gurgling sounds. One member of the group swam towards the shore calling for help as she swam. The other two divers pulled her onto a nearby rock, which was still breaking the surface and managed to recover the diver out of the water onto the rock. The diver was unconscious and blue but was making breathing efforts on her own. She was placed on her side with legs raised to help remove water from her lungs and then placed in the recovery position. There was reduced frothing and less gasping and some colour had returned to her face. Both divers with her on the rock continued to call for help. The diver who swam for help spoke to a man on the harbour wall who was on the phone and he had seen the incident and had called the coastguard and the lifeboat was in the process of launching. The lifeboat recovered the diver, put her on oxygen and took her to the shore where she was transferred to an ambulance. The lifeboat then returned to the rock to recover the remaining divers. One of the divers was allowed to dive to recover the casualty's equipment which had sunk during the recovery onto the rock. The diver located the equipment but was unable to inflate the BCD using the direct feed and had to orally inflate it. Once back on shore the equipment was checked and the contents gauge was showing 120 bar and the BCD inflate was found to be working. The unconscious diver was airlifted by helicopter to hospital. She regained consciousness in the helicopter and was taken to a recompression chamber where she received 6 hours of treatment. She was then retained in a high dependency unit at the hospital with pneumonia and other problems caused by partial drowning for 6 days.

June 2015 15/083

Two buddy pairs carried out a boat dive to a wreck at 30m. The second buddy pair had planned a no stop dive of up to 25 min or 80 bar which included partly inflating a lift bag on the shotweight for recovery by the dive boat, carrying out their dive and deploying a DSMB for their ascent. The divers descended 15 min after the first pair but when they arrived on the bottom at 30m they found the first pair was using the shotline for their ascent so decided not to attach the lift bag. About 5 min into the dive one of the divers had to constantly clear his leaking mask

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and he also felt his drysuit was over-inflated as his feet felt buoyant. He attempted, unsuccessfully, to dump air from his suit leading him to think that his buoyancy problem was because his drysuit boots were not fitting properly. After approximately 20 min the diver's buddy signalled to ascend as they were now running close to their no stop limit and he ascended above the diver to 26m to avoid going into decompression. To save time and effort deploying a DSMB the divers decided to return to the shotline during which the diver's mask started to flood more rapidly and he began to feel more concerned. They were unable to locate the shotline and after a short search assumed it had been recovered so the diver started to deploy his DSMB. This was hampered by his flooding mask and it took a minute or so to disentangle snagged line on the DSMB reel. The buddy descended from 26m to help the diver with the reel and went into 5 min of decompression time. The time spent looking for the shotline and deploying the DSMB meant the diver had also incurred several minutes of decompression stops. With the DSMB deployed the buddy held the line and ascended above the diver but at 18m noted they were both ascending too quickly. The buddy noticed the DSMB line was well away from vertical and felt his buddy let go of the reel. He held on to the line still trying to dump air and at 7m saw the line was almost horizontal but still too buoyant and unable stop his ascent he let go of the line. He surfaced with an approximate dive time of 30 min having missed a 4 min decompression stop and safety stop. The DSMB line had tangled with the shotline at the surface and also with the buddy as he surfaced. He was recovered aboard the boat and told them to look out for the diver as he would surface without a DSMB. The diver reported that at about 10m he had attempted to slow his descent but at around 7m he had felt the DSMB reel being pulled upward lifting him to around 5m and he let it go. He rapidly dumped air from his BCD and descended to 8m at which point he was aware his buddy was no longer with him. He tried to control his rising panic due to the constantly flooded mask, his buoyancy issues and now a missing buddy. He found it difficult to achieve neutral buoyancy and believed his depth varied between 8 and 3m before he managed to stabilise his buoyancy at approximately 6m and completed his decompression stops plus a safety stop and surfaced 5 min after his buddy. He was recovered by the dive boat where his buddy, who had no immediate symptoms, had been put on oxygen. Although the diver had not missed his decompression stops and his computer was not showing any errors or alarms, he was concerned about his ascent profile before carrying out his stops so was also put on oxygen as a precaution. The dive boat had not lifted the shot as they had seen bubbles around the line as the first pair of divers ascended and when they went back to recover it, the second pair's DSMB had surfaced alongside the line. As they returned to shore the dive boat called the Coastguard for advice. The Coastguard contacted a diving doctor and tasked a helicopter to airlift both divers from the boat. When the helicopter arrived the doctor who came down to the boat made the decision to only evacuate the buddy and he was taken to a hyperbaric chamber. After precautionary treatment the buddy was discharged later that evening.

June 2015 15/200

A diver and her buddy carried out a shore dive as part of a group of divers. They descended to 20m, paused to check all were together and descended to 30m. The diver then slowly began to ascend with everyone else but her fin started to come loose at about 23m. The diver tried to tighten the fin strap but was unsuccessful. She looked around and could not see anything as silt had been kicked up. At this point the diver's breathing increased significantly and she knew she required assistance. Two divers in her group, one of whom was her buddy, realised she was in distress. The buddy grabbed the diver's BCD and the other diver held her hand. The diver tried to control her breathing and felt reassured with the other divers holding her. The buddy inflated her BCD and they ascended to 22m. The diver was still panicking and unresponsive to her buddy's signals to ascend so the buddy sent her up to the surface. As she ascended the buddy noticed the diver spat out her demand valve and removed her mask at around 10m. The diver reported that her erratic breathing may have caused her mask to suddenly flood with the result that water went up her nose and she began choking. She ripped her mask off and was gasping for breath but did not remember when her regulator came out. The diver made a dash for the surface and breathed out as she ascended. She finally broke the surface gasping for breath and all she could do was lie on her back and try to breathe. She heard people shouting for help and realised they might think she was unconscious so she raised her arm giving the 'OK' signal. The diver's buddy thought she may have run out of air so inflated his drysuit and BCD and made a rapid ascent to the surface. His computer gave a rapid ascent warning, which he ignored. His ascent from 22m to the surface took 1 min and he surfaced with a dive time of 9 min to a maximum depth of 30m. The buddy found the diver laid on her back, finned over and saw she was conscious. He told her to put her regulator back in as she had 100 bar of air left and he would tow her to shore. Shore cover had already been alerted to one diver surfacing alone and in distress so a rescue boat had been launched. It arrived as the buddy began to tow the diver and they recovered her aboard. The buddy said he was happy to swim back to the shore. Once on shore both divers said they had headaches and were put on oxygen. The emergency services were contacted and an ambulance dispatched. Both divers were assessed by paramedics and they were taken off the oxygen as their headaches had eased and they had no further symptoms. A hyperbaric chamber had been contacted and co-ordinated with a local chamber and both the divers were evacuated by ambulance. At the chamber the buddy's headache had returned. He was diagnosed with DCI and received six hours of recompression treatment. The buddy came out of the chamber later that evening, his symptoms had resolved and following a check by the doctor he was discharged.

June 2015 15/076

A group of divers were diving a wreck from a charter boat. Two of the divers were the last buddy pair down towards the end of slack water. With the tide running and the shotline reported as being almost horizontal they took around 6 min to reach the bottom at 28m. They found that the shot was not on the wreck so one of the divers took a bearing and they swam into a slight current and found it almost immediately. Once on the wreck they were protected from most of the current and continued their dive. They checked their air and agreed to deploy a DSMB at 100 bar. They continued exploring and one of the pair found a large crab in a hole at about 25m. They had been down for around 23 min and had 140 bar and 130 bar left. Suddenly both divers encountered a current, one of them grabbed the wreck to hold herself down and her buddy went over the side of some wreckage and about 1m lower down, apparently out of the running tide. The diver holding onto the wreck was slightly inverted, and struggled to keep her feet beneath her. It was reported that although she had dived recently, she had not used a drysuit for some time before this dive. The buddy tried to get the diver to go with him but the pair had a slight altercation as the diver, still holding on, tried to get a photo of the crab. The buddy deployed his DSMB. The diver checked her air, which was 100 bar, swam down to her buddy at 26m and half knelt to place her hand round the DSMB line. At this point she lost buoyancy control and made a fast ascent. This was reported as being caused by an up current over the wreck against which the diver struggled, panicked and her increased breathing rate made her more buoyant. She grabbed the DSMB line but felt a tug below her and realised she was probably pulling her buddy up so let go of the line and made an uncontrolled ascent. The diver stopped just below the surface. On the surface she inflated her BCD and swam to the DSMB buoy where she waited for her buddy. The buddy's computer had indicated a 1 min

decompression stop which cleared as he ascended but he had felt it prudent to carry out a safety stop. Back aboard the boat the buddy checked if the diver was 'OK' which she was but very shaken by what had happened. The diver's computer was checked and she had ascended from 26m to the surface in 1 min, with a dive time of 25 min. It was recommended that she should not do a second dive and that her buddy should monitor her. The boat did not have sufficient seating so the diver stood for some time in choppy sea conditions. The buddy pair stopped for dinner on their way home and the diver had a small glass of wine to steady her nerves. She did not sleep well that night and noticed an unusual pain in her ankle so woke her buddy who said she should phone a diver emergency helpline. The helpline recommended she attend a hyperbaric chamber. At the chamber the diver was assessed and given recompression treatment during which the ankle pain went. The diver was discharged, told not to dive for a month and then return for a diver medical assessment.

June 2015 15/078

The Coastguard reported that a diver was flown by helicopter to a recompression chamber believed to be suffering from DCI. (Coastguard Report).

June 2015 15/085

A rebreather diver was on a hardboat diving holiday and had carried out one dive per day over three days. The first day was a dive to 38m for 52 min and the second day to 60m for 63 min, both with decompression stops. The dive on the third day was to a wreck at 44m. The diver carried out successful pre-dive checks on his unit and was using new sofnalime in the scrubber as it had completed a 60m dive the previous day. The diver entered the water with his buddy and they descended the shotline to the wreck completing bubble checks and the diver changed his set point to 1.3. The diver had no problems during the dive and at 30 min he began his ascent up the shotline. The required decompression stops were 1 min at 12m, 2 min at 9m, 3 min at 6m and 6 min at 3m. Whilst doing his 9m stop the diver was surprised by a number of divers coming down the shotline. Their urgency in descending made the diver lose some of his buoyancy dragging him down to 13m and he was also struck on the side of his head by one of them. The diver recovered his buoyancy and ascended to complete his next stop at 6m and up to 4m to carry out the 3m stops. He lost buoyancy again descending to 8m when another two divers went close by him on their rapid ascent up the shotline. The diver ascended back to 4m and completed the rest of his stops and did an extra 4 min of stops prior to surfacing with a dive time of 50 min. The diver felt fine and was not experiencing any discomfort. Back aboard the dive boat the diver de-kitted, had a coffee and assisted others coming aboard after their dives but 15 min later the diver suddenly felt dizzy. He then found himself collapsing and being supported by other divers. He was given an orange juice and put on oxygen but then felt nauseous and was sick. He was assisted out of his drysuit and placed in the warm in a horizontal position and kept on oxygen. The dive boat had contacted the Coastguard and a rescue helicopter airlifted the diver to hospital. On arrival the diver was still dizzy, unable to stand without assistance and had tinnitus in his right ear. He had a chest x-ray and CT scan and was then transferred to a hyperbaric chamber where he had six sessions of recompression treatment over the next six days. The diver was released from the chamber with a dry cough, possibly due to the continued oxygen exposure, slight balance issues and continuous tinnitus in his right ear.

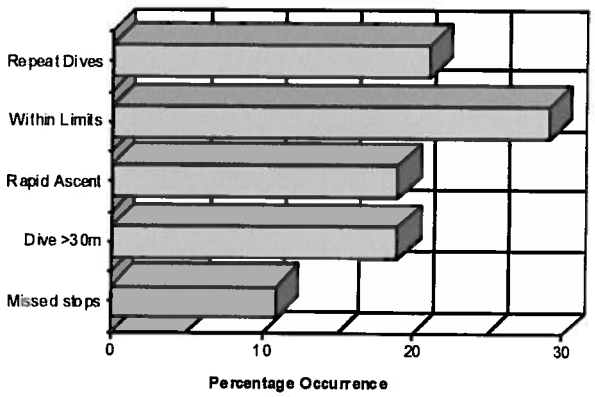
July 2015 15/107

A semi-closed rebreather diver, using nitrox 36, had completed a hardboat dive to 22m for 39 min including a 3 min stop at 6m. After a 2 hour 30 min surface interval the diver carried out a second dive on a wreck at 30m and ascended the shotline to his decompression stop. When he arrived at 6m he felt breathless and switched to his bailout air cylinder. The diver completed his 4 min stop at 6m and surfaced with a dive time of 25 min to a maximum depth of 30m. Back aboard the boat he felt dizzy and nauseous and the boat skipper put him on oxygen and the diver felt better. About 30 min after breathing the oxygen the diver felt unwell again and the skipper contacted the Coastguard and requested evacuation to a recompression facility. The diver was flown to a hyperbaric chamber where he received recompression treatment and made a full recovery. The diver had been found to be very dehydrated when he arrived at the chamber which was believed to have been a main contributing factor to his DCI.

July 2015 15/226

A diver had completed a dive to 39m for 37 min including decompression stops of 1 min at 20m, 1 min at 9m and 8 min at 6m. The diver was using air and nitrox 50 decompression gas. Approximately 90 min after the dive the diver experienced an itchy and 'tingling' sensation in his back which lasted 1 to 2 min before completely disappearing. As the symptoms disappeared the diver assumed they had been caused by wetsuit irritation. The same symptoms came and went at about 2 hour intervals. The following day the diver experienced a more painful itchy 'tingly' sensation in his back and it was noticed that he was very lethargic and tired. The diver contacted a diving doctor who said he should be seen by a hyperbaric chamber doctor. Both doctors were more concerned about the diver's behavioural change and thought the itchy sensation was because of the wetsuit. The diver attended the chamber and received recompression treatment and the diver's lethargy and tiredness improved but it was decided his back symptoms were also likely to have indicated DCI. After a further examination the chamber doctor concluded the diver had experienced an 'undeserved' DCI and was going to refer the diver for a PFO scan before he was allowed to return to diving.

Percentage analysis of factors involved in cases of DCI



July 2015 15/229

A diver had carried out the first dive of a diving holiday using a hardboat to a wreck at 34m. The diver surfaced with a dive time of 37 min to a maximum depth of 34m including decompression stops of 1 min at 9m and 3 min at 6m. The diver ate a sandwich and drank tea but approximately 30 to 45 min after surfacing the diver suffered severe vertigo, vomiting, difficulty in balancing and confusion. The other divers in the group believed the cause could be illness, food poisoning or DCI. The diver was put on oxygen, given small amounts of water, laid down and kept warm. Emergency services were contacted and the boat returned to

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harbour. An ambulance took the diver to hospital and she was evacuated by helicopter to a hyperbaric chamber. The diver underwent seven sessions of recompression treatment over the next five days with a brainstem and inner ear DCI diagnosed. The casualty had residual hearing loss and difficulty with balance and was referred for a PFO assessment at a later date.

July 2015 15/230

A student on a diving course carried out a shore dive. During the descent at around 14m the student's mask was leaking. She was assisted to clear it, 'OK' signals exchanged and the descent continued. The student then bolted from 16m to the surface and the diver, who had helped with her mask, managed to arrest the ascent. The divers surfaced with a dive time of 6 min to a maximum depth of 16m and the alarm was raised. The student had painful ribs, shortness of breath and was given oxygen. A hyperbaric chamber was contacted and a dive doctor said the student had a possible pneumothorax and needed an x-ray at A&E.

July 2015 15/117

A group of four divers were diving in two buddy pairs over a weekend. The first dive on the Saturday to a maximum depth of 3m for 30 min. This was a shore check out dive as one of the group had recently qualified and another had not dived for a year. All the divers were happy and comfortable during the dive so a drift dive from a hardboat was booked. After a 3 hour 37 min surface interval the divers carried out the drift dive to 21m for 48 min including a 3 min safety stop. Due to rocky outcrops on the seabed and the current, their depth had fluctuated between 20 and 13m during the dive. After a 2 hour 51 min surface interval the two more experienced divers in the group, one diving air and the other nitrox 32, carried out their third dive of the day on a wreck at 30m from the hardboat. The divers reached a maximum depth of 30m, left the wreck after 30 min and carried out approximately 20 min of decompression stops at a depth between 6 and 3m and then a safety stop. Their dive time was 59 min and their maximum depth was 30m. Shortly after getting back on the boat the air diver started to experience mild discomfort in his left shoulder. One of the group left on the Saturday evening and the remaining three stayed overnight. On the Sunday, the diver mentioned to his two dive buddies that his shoulder and elbow discomfort had got worse overnight but with no undue concern he decided to carry on with a planned drift dive from the hardboat. Using air, his dive was to a maximum depth of 13m for 57 min with a 3 min stop at 6m. The diver's shoulder and elbow discomfort increased slightly after the dive. As diving concluded, due to deteriorating weather conditions, the divers returned home. After he arrived the diver's shoulder and elbow pain had not improved so he contacted a hyperbaric chamber for advice, was advised to attend and diagnosed with DCI. The diving doctor commented on the saw-tooth profile of the drift dive and also the reverse profile of the dives on the Saturday. The diver received recompression treatment followed by three further sessions over the next three days. The diver was discharged and advised not to dive for four weeks.

August 2015 15/101

A rebreather diver and his buddy using air in a 12 lt cylinder plus a 3 lt pony cylinder, were diving from a hardboat. They had carried out a dive on a reef to 21m for 37 min with a decompression stop at 11m for 2 min and a 3 min safety stop at 3m. The second dive of the day was on a wreck at 32m. The conditions on the site were marginal with a large swell and 15 to 18 mph winds but the divers were confident they could be safely dropped and picked up by the dive boat. The divers were the last pair in and were a bit rushed in kitting up and entering the water. The diver reported that his bailout regulator, which in its normal position would be over his arm, was under it for this dive. The diver instructed his buddy to swim to the shotline and then immediately descend to 6m where it would be more comfortable to check each other and then continue the dive. The check was carried out at about 10m due to the swell and slight current. During the check the diver tried to free his buddy's torch which was tangled around her regulator hose but she signalled to leave it. She was concerned about her alternate source regulator which had become dislodged and the diver tried to signal that he would help her re-stow it when they were on the bottom with all hands free. The pair continued their descent with the diver slightly in front and checking behind every few metres but he missed his buddy tapping on his unit cover to say she felt uncomfortable. It got darker and the visibility was no more than 3m but the diver could see other divers' torchlight on the seabed below. At 26m he turned to his buddy and found she was breathing quickly; the buddy then started to swim back up the shotline. The diver followed, put his hand up in front of her face and signalled 'stop' but the buddy did not respond nor slow down. The diver grabbed a loop on his buddy's BCD with his right hand and the shotline with his left to slow their ascent but the buddy continued to swim towards the surface. At some point the buddy kicked the diver's mouthpiece out. As he was hanging onto her and the shotline he could not retrieve his mouthpiece or bailout regulator. He inhaled some water but then kept his mouth closed until they both surfaced with a dive time of 4 min and a maximum depth of 26m. The diver was able to inflate his buddy's BCD, retrieved his bailout regulator and closed the rebreather's mouthpiece. Both divers were quickly picked up by the dive boat and the skipper helped them de-kit. They sat on the deck with some water to drink but about 3 to 4 min later the diver started to feel tightness in his chest so moved across to his rebreather, transferred his bailout regulator to the oxygen feed and started to breathe it. He began to feel worse and had 'tingling' in his hands and feet and asked the skipper to call the Coastguard. The diver was sick and when the other divers returned to the boat one of them took over managing the incident. The Coastguard had initially wanted the boat to return to harbour but there was no accessible harbour within twenty miles due to the low tide. Entry to a closer harbour would have entailed a two to three hour wait. The skipper argued against this and insisted on a helicopter for his diving emergency. The diver breathed down the contents of the oxygen on his unit and was transferred to the boat's oxygen kit but he was barely conscious. A helicopter arrived and took the diver and his buddy to hospital. The diver was x-rayed, had head and chest CT scans and was transferred to a hyperbaric unit where he received recompression treatment over the next three days. The final diagnosis was that the diver had suffered a cerebral arterial gas embolism but he made a full recovery. The diver was advised he would need a medical at a later date to confirm he could recommence diving.

August 2015 15/112

A dive leader and his buddy carried out a hardboat dive to a wreck at 32m. Both divers used air in 15 lt cylinders and 3 lt pony cylinders with the dive leader using tables and the buddy a computer. The divers took 6 min to descend with regular checks and 'OK' signals. They first dived outside the wreck where a slight tide was running, then onto to the top of the wreck and into an open hold. At 22 min into the dive the dive leader deployed his DSMB. The divers made a very slow ascent with the diver leader winding the reel and the buddy reaching up at intervals to pull down on the line and keep it taut. At 32 min they arrived at 6m where they made a 3 min safety stop. They surfaced with a dive time of 38 min and a maximum depth of 32m. Back aboard the boat the buddy had a hot drink and a piece of cake but developed stomach cramp and attributed this to the cake. His symptoms rapidly deteriorated and, in significant pain, he was laid down and the oxygen kit prepared. The buddy then started to feel numbness in his legs, oxygen was administered and the skipper contacted the Coastguard. A helicopter evacuated both divers to hospital where the dive leader needed no treatment but

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the buddy was transferred to a hyperbaric chamber and received several hours of recompression treatment. He was kept in hospital overnight for observation, discharged the following morning and asked to return for further checks two week's later.

August 2015 15/157

Ambulance control called the Coastguard to request a helicopter transfer for a diver who was suffering from DCI. His symptoms started 1 hour 45 min after he surfaced from his dive. The diver was airlifted to a hyperbaric facility. (Coastguard report).

August 2015 15/153

The Coastguard received a 'Pan Pan' call from a dive boat reporting that one of their divers was showing signs of DCI. The diver had carried out an air dive to 28m for 37 min but lost buoyancy control and had made a rapid ascent missing decompression stops. 6 min after surfacing the diver had slight nausea and 'pins and needles' in both hands and had been put on oxygen. Medical advice was obtained from the duty dive doctor. The diver was evacuated by helicopter to shore and transferred by ambulance to a recompression chamber for treatment. (Coastguard report)

August 2015 15/108

A diver had completed a 15m dive for 10 min and after a 1 hour 30 min surface interval carried out a second dive to 19m. With his buddy, who was diving using a rebreather, the diver deployed a DSMB at 17m for their ascent but the reel got tangled and started to lift the pair. The buddy let go of the diver at 15m who continued to ascend without letting go of the reel. The buddy surfaced after he deployed his own DSMB at 6m and had completed a 2 min stop on oxygen. The diver, who had a dive time of 27 min to a maximum depth of 19m, was back aboard the dive boat when the buddy surfaced. The buddy advised the skipper of the rapid ascent and the diver was put on oxygen. The diver started to complain of 'pins and needles' in his fingers and toes so was laid flat whilst breathing the oxygen, took sips of water and was monitored. The skipper contacted the Coastguard to report the incident and the diver was airlifted to shore and transferred by ambulance to a hyperbaric chamber where he received recompression treatment.

August 2015 15/277

The casualty planned to complete several dives throughout a week's diving trip. The casualty completed four dives over two days but in the evening on the second day she complained of pain in her left breast area. Her last dive was to a maximum depth of 36m. One hour later the pain persisted and so she was placed on oxygen and the diving chamber were contacted for advice. The chamber called the casualty in and she received recompression treatment for a mild skin DCI.

August 2015 15/239

A group of three divers had completed two dives the previous day. The first dive was to 25m for a total dive time of 40 min including a 3 min safety stop and after a surface interval of 2.5 hours a second dive to 20m for a total dive time of 40 min including a 3 min safety stop. The next day the group conducted a dive to a maximum depth of 25m for a total duration of 50 min. Two of the divers were using rebreathers and the third was on open circuit using twin 12 lt cylinders. The leading diver regularly checked the open circuit diver for any decompression requirements but none were indicated. As the divers commenced their ascent the open circuit diver indicated he required a stop at 9m for 1 min and then after completing this stop the group conducted a safety stop at 6m for 3 min. The group surfaced and regained the boat and, after about 20 min, the open circuit diver appeared uncomfortable and complained of a pain in his left groin/leg. This progressed to numbness in his left leg. The diver was laid down, given oxygen and fluids, and the skipper called the Coastguard who arranged a link call with the divers' helpline. Further tests were carried out on the diver and he was found to have noticeable weakness in his left arm and leg. This information was relayed to the diving doctor who decided to evacuate the diver to a recompression facility. A helicopter was tasked and the diver was airlifted to a recompression chamber where he received a 5 hr recompression treatment which resolved all symptoms and he was discharged with advice to have a check for a possible PFO. It was reported that the helicopter had requested a smoke flare to be deployed to assist with identifying which boat in the area had the casualty. When this was deployed the boat was not heading into the wind and so the ash fell on the casualty.

August 2015 15/121

A group of divers were on a hardboat diving holiday and their fifth dive of the trip was on a wreck. A diver in the group wanted to go to 40m to view a particular section of the wreck but his usual buddy did not want to go that deep so another experienced diver agreed to be his buddy. During their buddy check the diver mentioned that his drysuit dump valve had been leaking so he would tighten it underwater and release it for the ascent. The divers descended the shotline and headed down the deck of the wreck. At 40m the diver passed below his buddy and then turned back to try and find the wreck feature. There was no indication of any problems at this point. The buddy became aware that the diver was no longer with him so he turned back and found him inverted and holding onto the wreck at 34m with his torch apparently entangled in deck plating. The diver had disconnected his drysuit inflator hose as he had felt his drysuit's legs filling with air, he had double checked his shoulder dump was fully open and was now trying to get his legs down. The buddy attempted to lower the diver's legs without success. The diver pointed to his left chest and it was not clear to the buddy whether he was in pain or suffering from narcosis. The buddy decided to take the diver to the surface as slowly as possible so freed the diver's torch from the deck plates, dumped all the air from his own drysuit and BCD and held onto the buddy. The ascent became buoyant and took around 1 min from 32m to the surface. The diver's regulator was maintained in place throughout but the buddy missed safety stops as the diver had lost consciousness during the ascent. The pair surfaced with a dive time of 16 min to a maximum depth of 41m with the diver still unconscious but breathing. The buddy signalled the dive boat but, with all the other divers underwater, the skipper was the only person aboard. He and the buddy recovered the diver using the boat's dive lift. A neighbouring dive boat came across and the skipper came aboard with one of his diving group to assist. The diver was placed on oxygen and the Coastguard contacted. The diver recovered consciousness after about 5 min and the buddy, who was a diving doctor, spoke to a hyperbaric facility who agreed the diver should be evacuated to their chamber. Around forty minutes later a helicopter arrived and evacuated the diver to the chamber where he was diagnosed with a cerebral gas embolism and given recompression treatment. He made a full recovery and was released from hospital three days later.

August 2015 15/228

A rebreather diver and his buddy on air carried out a RHIB dive to a wreck at 35m. The divers began their ascent from 30m with the rebreather diver using his drysuit for buoyancy control. At approximately 8m the divers started to slow their ascent rate for their decompression stop of 7 min at 6m. The rebreather diver was unable to slow his ascent for the stop so manually purged his drysuit shoulder dump and checked his wing BCD. At 4m the buddy attempted to grab the diver to slow him down but was unable to reach him so returned to 6m to complete his decompression stops. The diver decided to invert and fin back

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down but did not descend and noticed that air had collected in the legs of his drysuit. Finning was ineffective so the diver conducted a forward roll in an attempt to move the air in his drysuit legs back to his upper body so he could dump the air and also prevent a feet first ascent. When he completed the roll the diver looked up and saw he was 2 to 3m from the surface. Despite trying to manually dump air from his drysuit the diver surfaced with a dive time of 40 min to a maximum depth of 35m. The diver informed the boat cover of his buoyant ascent from about 8m and that he had missed his decompression stops but his buddy was still below carrying out his stops. The diver was recovered into the RHIB, put on oxygen and fluids administered. The buddy surfaced and was recovered to the RHIB. A hyperbaric chamber had been contacted through the Coastguard and an ambulance met the RHIB when it returned to harbour and evacuated the diver to the chamber. Although the diver was asymptomatic from surfacing to arriving at the chamber, he was given recompression treatment.

August 2015 15/160

A helicopter was tasked to a dive boat as a diver had symptoms of DCI and been put on oxygen. The diver's buddy had dived the same profile. The diver was airlifted to hospital. (Coastguard report).

August 2015 15/176

Three divers were RHIB diving and carried out a reef dive to a maximum depth of 25m for a dive duration of 40m including a 5 min safety stop at 6m. One of the divers ascended quickly from 5m to 2m but then slowed down and all the divers surfaced together. As they travelled back to shore and about 25 min after surfacing the diver felt as though he had heartburn. This was followed by a 'pins and needles' sensation in his legs and feet. The skipper was informed and the diver put on oxygen. A call was made to a hyperbaric chamber and they advised the diver to attend as soon as possible. The diver received recompression treatment and was allowed to leave that day but told to return the next morning. Further examination showed complete resolution to the diver's symptoms.

August 2015 15/237

A group of five divers had completed a dive to 20m and after a surface interval of 3 hours commenced a second dive on a wreck at an inland site to a maximum depth of 20m. After visiting the wreck the group were returning to shore and at a depth of 15m one of the party deployed a DSMB, which became tangled and dragged the diver up to 10m before he ditched the DSMB and reel and re-descended to rejoin his buddy. The pair became separated and the buddy subsequently reported her impression that something had hit her causing her to lose her buoyancy control and she ended up on the surface. On losing sight of his buddy the diver searched up and down a couple of times before relocating her on the surface. One of the other divers in the party towed the female diver to the shore whilst her buddy swam to retrieve his ditched DSMB. During the drive home the female diver felt more tired than usual and began to experience 'pins and needles' in her fingers and an ache in her right forearm. A diving doctor was contacted and the pair were advised to attend a recompression chamber where the female diver was diagnosed with a skin DCI and both divers received a total of 4 sessions of recompression treatment.

August 2015 15/131

Two nitrox divers had carried out a dive from a hardboat to a wreck. One of the divers was using a 10 lt twin-set and her buddy a 12 lt twin-set. They dived to 43m, which was the deepest that either of the divers had done. They had however used their twin-sets on several occasions and dived regularly to between 30 and 35m. They had planned their dive using a combination of air tables and the diver's computer set at nitrox 24, which was the mix she was using. Her buddy was diving nitrox 26 and the planned dive was well within his computer limits. The pair had a bottom time of 20 min and then ascended carrying out a stop at 22m for 1 min as required by the diver's computer. They stopped at 9m for 1 min as required by the air tables and at 6m for 23 min which was more than either the tables or their computers required and they had added an extra 3 min at 6m as additional safety. The divers then ascended slowly stopping at 3m and 2m for 1 min and surfaced with a dive time was 54 min to a maximum depth of 43m. After the dive it took about 45 min to return to the harbour. The divers unloaded the boat and the diver carried his twin-set and then his buddy's along a pontoon and up a ramp to a car park, a total distance of about eighty metres. The buddy carried some heavy bags the same distance. They then drove to the diver's home and 2 hours after completing their dive, the buddy noticed a hot and constricted sensation in her right upper arm and a red, mottled rash appeared which was hot to the touch. She spoke to the duty doctor at a hyperbaric chamber who advised she attend for a check up. The diver drove her to the chamber where an examination concluded that the buddy had an acute spontaneously improving cutaneous DCI injury to the upper arm but no other symptoms were diagnosed. Under the doctor's advice the buddy was recompressed and shortly after treatment started the rash was reduced and the heat sensation in her arm resolved. Over the course of the remaining treatment the rash disappeared completely and the buddy was discharged. She spoke to the doctor the following morning who advised there was no need for her to return to the chamber.

August 2015 15/125

A diver on air and his buddy on nitrox 32 were diving a wreck from a RHIB and descended the shotline. This was the deepest dive the diver had done for a while. The diver was unable to dump air from his drysuit shoulder dump but thought he could deal with this as long as the pair used the shotline at the end of their dive to ascend. Due to poor visibility the divers could not re-locate the shotline and, with a dive time of 25 min, the buddy signalled to ascend using his DSMB. At 15m the diver could not control his buoyancy and surfaced. He vented his drysuit by pulling open the neck seal and descended back to 6m where he completed 6 min of decompression stops. As the diver began to ascend from 6m his computer showed that he now needed to carry out a 14 min stop at 3m but his buddy diving nitrox 32 required no further stops. The diver said that he had always been very buoyant when diving, using a 15 lt steel cylinder and 28 lbs weight, and it was clear to him that he would not be able to stay at 3m for 14 min so he surfaced with a dive time 38 min to a maximum depth of 36m. The diver explained the situation to the skipper of the RHIB who recovered the diver aboard and put him on oxygen. It was noticed that the diver's BCD was slowly inflating due to a faulty inlet valve. The Coastguard was contacted as the boat returned to shore and a helicopter evacuated the diver to a hyperbaric chamber where he received recompression treatment.

August 2015 15/118

A trimix diver had completed a shore dive to 54m for 52 min. After he de-kitted the diver complained of back pain which he tried to relieve by stretching. Five minutes later the diver complained of dizziness and nausea, was laid down and oxygen administered. Neurological checks were carried out by another diver who was also a paramedic. The diver was checked 15 min later and after another 15 min the diver was moved to a car for transfer to hospital. The diver was now extremely dizzy, required help to get into the vehicle and was sick. The emergency services had not yet been informed as the dive site had no mobile phone signal but a few minutes later a call was made to the Coastguard to inform them of the incident and confirm that the diver was on his way to hospital. The Coastguard rang back

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to confirm that a team had been paged to meet the diver at the hospital and a helicopter had been scrambled. The diver was now complaining of altered sensation in both legs, a 'tingling' sensation over his stomach, back pain and he appeared to be drowsy. 1 hour and 15 min after surfacing the diver arrived at the hospital where he was examined by a doctor and transferred by the helicopter to a hyperbaric chamber where he received recompression treatment.

August 2015 15/122

A diver had surfaced from a dive and began to experience symptoms of DCI. A lifeboat was launched and started to take the diver to the nearest hospital. The lifeboat was met by a local rescue boat and the diver transferred and taken to hospital for treatment. It was reported that the diver may have needed recompression treatment. (Media report).

September 2015 15/165

A diver carried out a wreck dive to 30m from a dive boat. On her ascent she inflated a DSMB at 23m but her pressure gauge, which was not clipped to her BCD, caught in the DSMB line and the diver was pulled to the surface in less than 30 sec. The diver surfaced with a dive time of 24 min to a maximum depth of 30m. The diver was put on oxygen and the Coastguard was contacted. There were no obvious DCI symptoms apart from slight nausea. The diver was taken to a hyperbaric chamber and received recompression treatment. The diver fully recovered with no further symptoms.

September 2015 15/130

A diver carried out a boat dive to a wreck. This was the first time he had dived in the sea with a wing BCD and a 12 lt manifolded twin-set. Prior to the dive there was an issue with his DSMB reel, it would not easily clip on to and release from the 'D' rings on his harness. It was thought better to leave the DSMB behind rather that dive with a potentially faulty piece of equipment but this meant that the diver would need to rely on another diver for surfacing with a DSMB. The diver descended onto the wreck with two buddies and a few minutes into the dive a significant amount of monofilament line was encountered by the group. The two buddies started to remove the line and the diver hung over the area away from the line. At some stage the diver lost sight of his buddies and tried to track their position using their trail of bubbles. The diver then realised that the underwater light level had increased and when he checked his computer he was ascending quickly. He dumped air from his wing and drysuit and stabilised his buoyancy at 7m. A current was running and with no DSMB the diver thought there was a risk of separation from the boat on surfacing, so he took the decision to ascend after 1 min at 7m and surfaced with a dive time of 21 min. The boat came over and when the crew asked the diver to remove his harness and wing in order to recover him into the boat they reported that he appeared to find it difficult to do this himself so they had to assist. The two buddies surfaced approximately 10 min after the diver. They had made a controlled ascent using a DSMB and carried out a 3 min safety stop at 6m. The diver felt fine on the boat and did not report any issues during the journey back to shore but he started to feel very tired during his car lift home. The following morning he had a skin rash and sore knuckles and suspected DCI. He attended a hyperbaric facility where he was diagnosed with DCI. After initial recompression treatment of six hours, which relieved his symptoms, the diver received a further six sessions of treatment over the next few days. He was advised not to dive for four weeks and then be re-assessed by a diving doctor before diving again.

September 2015 15/169

A diver was diving from a boat and his first dive was on air to 33m for 61 min with a decompression stop using nitrox 72 at 6m for 9 min. After a surface interval of 1 hour 50 min the diver completed a drift dive using air to 23m for 29 min with a 3 min safety stop at 6m. A few minutes after surfacing the diver reported pain in his right shoulder and requested to be put on oxygen. Over the next 10 min he also reported pain in his right elbow. His skin was inspected for a rash but there only appeared to be slight redness on his shoulder. A hyperbaric chamber was contacted for advice and they made the decision to call an air ambulance to evacuate the diver. The diver remained on oxygen and took on fluids for a further 30 min. During this time the dive boat had returned to port and tied up in the harbour to await the air ambulance. Although a shoulder rash had developed, the diver felt much better. The air ambulance attempted but failed to land in the vicinity of the dive boat. The diver remained on oxygen until a land ambulance arrived and took him directly to the hyperbaric chamber where he was diagnosed with DCI and received recompression treatment. He was discharged later that evening with instructions to seek a dive medical a few weeks later and discuss whether to have a PFO test but not to dive in the meantime. The casualty had reported cramp on the decompression stops during the first dive and admitted to not having drunk much liquid over the course of the day. He had also recently changed the gradient factors on his dive computer from 20/80 to 30/75 and had completed additional minutes of decompression at 6m on the first dive to comply with his buddy's computer dive profile.

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Injury / Illness

October 2014 15/003

A member of a diving group raised the alarm when one of the divers felt unwell after surfacing from a shore dive. An ambulance and helicopter arrived on the scene and the diver was flown to hospital. (Media report).

October 2014 15/001

Two divers had carried out a wreck dive to 35m for 28 min and after a 2 hour surface interval carried out a second wreck dive to 25m for 36 min. During the early part of their ascent one of the divers experienced a very painful sinus squeeze at 18m. The diver had been congested with a slight cold but had forgotten to take decongestants prior to the dive. The sinus pain caused the diver to hyperventilate and she rapidly breathed down her air supply. She alerted her buddy to the situation so they agreed to surface and he deployed his DSMB. With her air running low the diver switched to her buddy's alternate supply to continue the ascent but at 10m she began to experience a reverse blockage with severe pain in both her ears. The diver attempted to alert her buddy but the pain was so bad she began to panic. Both divers were now at 6m and the diver released hold of her buddy's octopus regulator and tried to re-descend but without air had to retrieve it. The buddy vented his BCD and both divers descended to 12m to allow the blockage to clear and, although still painful, the diver felt her ears were 'manageable'. The pair re-ascended with the diver feeling slightly disorientated due to the ear pain. They did not have enough air to complete a safety stop and surfaced where they were picked up by the dive boat. Back aboard a small amount of blood was noticed in the diver's mask and she had painful ears but otherwise felt fine so oxygen was not administered. The diver reached home at 1am the next day feeling tired and her ears were still sore. She then noticed a rash had formed on her shoulder, neck and upper back resembling sunburn and was 'tingling and itchy'. She called a hyperbaric centre and spoke to a doctor who advised that she get someone to take her to A&E for evaluation. By the time she was examined the rash had almost disappeared. Following assessment and in consultation with the hyperbaric centre the diver was placed on high flow oxygen for 6 hours as a precautionary measure. She was advised that her ears were inflamed but the eardrums had not been damaged. The diver was re-assessed and discharged with the advice to rest for twenty four hours and call if any further symptoms arose. She was also advised to check with her GP before she returned to diving and not to attend a planned instructor course the following weekend.

October 2014 15/002

A diver had completed two dives on a Sunday, one to 28m for 40 min and the second to 20m for 52 min. After the first dive he noticed he had developed a sore left hand as though he had hit it. There was a hard lump on a bone between the knuckle of his index finger and wrist. The diver had experienced this before but had thought at that time it was the result of a knock so assumed the sore hand after the dive had again been caused by hitting it, although the diver did not remember doing so. As the soreness did not get any worse, the diver carried out the second dive without incident and there was no change in the condition of his hand. On the Monday the diver carried out a circular search dive to 12m for 16 min. The diver returned to his accommodation and although his hand was still sore there were no other symptoms but when he had a bath his hand began to swell. The diver contacted a medic who said it was not diving related but to double check with a diving doctor. The doctor said that no further action other than rest was required.

October 2014 15/009

A buddy pair were ready to enter the water from their boat using a backward roll. On the 'go' signal from the cox'n one diver entered followed marginally later by her buddy with the result that he landed on top of her. The buddy's cylinder hit her arm but the diver signalled to the boat that she was 'OK', waited a few moments to check her arm and then the divers continued with their 20m dive for 25 min. The dive manager checked the diver after the dive and she had a bruise on her arm but no other injuries.

October 2014 15/022

An instructor and her trainee were carrying out a shore dive which included controlled buoyant lift skills from 6m and an exploratory dive to a maximum depth of 20m. The instructor was accompanied by a standby diver who was also to act as the trainee's buddy. The trainee said that he had a cold the previous week but was now fine. After completing the controlled buoyant lift skills the instructor descended from 6m to a wreck at 14m followed by the trainee and diver in a buddy pair. The trainee was clearing his ears all the time but indicated that he was 'OK'. On the wreck the trainee indicated he had a problem with his mask and wanted to ascend. The instructor held one of his hands and indicated that there was no water in his mask and it was fine. She then felt the trainee start to panic so ascended about 1m on the wreck hoping he would calm down. The trainee kept indicating to ascend and the instructor tried to get him to look at her but he would not. By this time the trainee was now holding both the instructor's hands and, aware she would be unable to control her buoyancy on the ascent, she let go of one of them. The trainee then let go of her other hand, pulled his regulator out, pulled off his mask and threw it aside. The standby diver immediately pushed the trainee's regulator back in his mouth and purged it. The trainee did not keep it in so the instructor tried to replace the regulator without success. The trainee pushed away from the instructor and then his arms fell to his sides, his head fell back and his eyes were closed. The standby diver inflated his own BCD and immediately took the trainee to the surface with the instructor close by. Their dive time was 10 min. On the surface the trainee appeared unconscious with blood around his nose and small bubbles coming from his mouth. As the instructor shouted for help and gave the distress signal the standby diver asked the trainee if he was breathing and he replied he was. When asked what the standby diver's name was, the trainee replied correctly. A rescue boat had been launched and the trainee was recovered into the boat and taken ashore. The instructor and standby diver swam ashore and found the trainee was fine. He was taken to a room in the dive centre to warm up and stayed there for about forty-five minutes. The dive centre staff monitored him and believed he had not inhaled any water. The trainee remembered nothing about the incident.

October 2014 15/268

A student was making his first dive in the UK, and it was noticed that he didn't seem comfortable clearing his mask. The instructor took the student up to the surface to clear his mask and adjust it for a better fit. They began their descent to join the other divers. Just as they went below the surface the student bolted to the surface and was short of breath. He said he had asthma - which he had not previously disclosed. The student had gone into severe panic and the instructor needed to tow him back to shore pulling his tank valve. The instructor called to the shore support for help. During the swim back the casualty fell in and out of consciousness. Once at the shore the casualty was unresponsive but, soon after, he started making gasping sounds. Oxygen was administered until the rescue services

arrived. During the rescue the other two divers returned safely to the shore. Maximum dive depth was 2m.

October 2014 15/248

Lifeboat launched to help diver with illness. (RNLI report).

November 2014 15/270

The casualty fell up steps and twisted her back as she landed. She reported lower back pain so a paramedic on site called an ambulance. The casualty was transported to hospital and is suspected to have sustained 'sacroiliac' strain on the left side.

November 2014 15/133

The Coastguard received a call reporting that a member of a diving party was having breathing difficulties following a shallow dive. A nurse practitioner was in attendance and the diver was on oxygen. The diver was connected to a diving doctor who gave medical advice and requested the diver be seen at a hospital. A Coastguard rescue team located the diver and an ambulance transferred the diver to hospital. (Coastguard report).

November 2014 15/271

The casualty was seen by an instructor who was the surface support for a different dive group. The casualty was sitting on a box drinking water. When asked if he was alright, the casualty responded that he felt dizzy. He said again that he was dizzy and fell towards the ground. He was placed in the recovery position but remained conscious and responsive. The emergency services were contacted and the casualty was taken to hospital for examination.

January 2015 15/272

A student had completed his first open water dive with no problems. During the surface interval he began to feel unwell. He was administered oxygen at the site and kept warm while the emergency services were called. Hypothermia was diagnosed on site and the casualty transported to the hyperbaric chamber. A neurological test was done and the casualty was discharged with no further treatment. The water temperature was 4 deg C.

February 2015 15/067

An instructor and his trainee were carrying out a depth progression training dive from the shore. They descended to 6m without any problems but at 10m the trainee indicated he had a problem with his right ear so they halted the descent, the trainee ascended a little and his ear cleared. The pair continued a gradual descent but at 13m the trainee indicated he had ear problems again and then became unresponsive. The instructor carried out an immediate controlled buoyant lift to the surface, made the trainee buoyant and called for help. Their dive time was 5 min. The trainee complained of feeling sick and giddy so the instructor towed him the short distance back to shore. Assistance quickly arrived and the trainee was recovered from the water and assessed. His condition improved although he was very unsteady on his feet. The trainee was taken to hospital where it was determined he had damaged but not perforated his right ear drum and was advised to see his own doctor the following day. The trainee was discharged into the care of the instructor who ensured he reached home safely by which time the trainee's condition had greatly improved. The GP diagnosed a reverse ear, put the trainee on tablets and advised him not to dive for 6 to 8 weeks.

February 2015 15/032

The Coastguard received a call reporting a diver emergency. A Coastguard rescue team, an ambulance and a helicopter were tasked to the site. After the diver was assessed by paramedics and the Coastguard, she was flown to hospital. (Media report).

February 2015 15/039

An instructor and his trainee, on her second shore dive of the day, had carried out mask and buoyancy skills together with an exploratory dive to 6m. Around 17 min into the dive they ascended to 3m where the trainee did a forward roll and spat out her regulator. The instructor gave it back to her but she rejected it so the instructor took her to the surface. On reaching the surface the trainee went into shock. She was removed from the water, placed in the recovery position and treated for shock. A nurse was nearby and gave assistance. The trainee was taken to a changing room for warmth and she recovered within 30 min. The trainee reported that her regulator would not give her air and was letting in water which is why she spat it out. The trainee later reported she had some chest pain and was advised by paramedics that she should be checked out in hospital and monitored overnight as a precaution for secondary drowning. Secondary drowning was not diagnosed at the hospital. The trainee did not dive the next day and she was monitored by her dive group over the next two days and reported everything was fine. The regulator was later checked by an engineer and although out of service was found to be functioning normally.

March 2015 15/042

On the first dive of the day an instructor was shore diving with two trainees. They descended to 6m and carried out mask clearing and partial controlled buoyant lift skills. The group descended to 10m where the instructor deployed a DSMB and secured it to the quarry floor with rocks. The trainees performed a controlled buoyant lift to the surface with one acting as the rescuer and the other as the casualty. The group re-descended using the DSMB line. At 5m the instructor checked his trainees and saw that one of them was not holding onto the line and pointing at her ears. The instructor went to the trainee and signalled her to ascend so she could clear her ears but it appeared the trainee was unable to do so and was panicking. The instructor began a controlled buoyant lift from 7m on the trainee and signalled to the other trainee to ascend. A lot of air was required in the trainee's BCD to arrest her descent and lift her to the surface. Their dive time was 19 min. On the surface the instructor checked on the other trainee and saw he was approximately 3m below and rising. The trainee with the ear problem was clearly in pain and the group swam back to shore. The trainee recovered from the initial shock but still had painful ears. She did not dive again that day but later that evening her condition seemed to deteriorate so she called a hyperbaric chamber's advice line and was advised that no DCI risk was present and her symptoms were just a reaction to the day's stress.

March 2015 15/041

A buddy pair had dived on a Saturday from a hardboat with a first dive to 22m for 39 min followed by a 3 hour 15 min surface interval and a second dive to 30m for 41 min. On the Sunday they had planned a wreck dive and agreed they would drop down to 50m and then ascend slowly up the wreck. At 47m the pair exchanged 'OK' signals but very shortly afterwards they became separated. One of the divers looked for her buddy's torch light but not seeing it decided to start her ascent during which she continued to look for her buddy. At 20m the diver realised she was getting tired, perhaps a little anxious and was breathing hard through her regulator. At 8m the diver wanted to cough. She later reported she had felt a 'gurgling' just under her left collar bone and needed to clear it. The diver coughed hard and breathed deeply expecting her breath to be clear but it wasn't. Needing air, she coughed again but the same thing happened; although the air from her regulator was clear, her chest was not. Although her computer indicated she needed to complete a 1 min stop at 3m, she decided to miss the stop and

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surfaced. Her dive time was 16 min. On the surface the diver still had trouble breathing and coughed up pink fluid. She was picked up by the dive boat and put on oxygen straight away. In the meantime her buddy had surfaced. The Coastguard was called and they tasked a lifeboat to transfer both divers to hospital. A diving doctor on the lifeboat evaluated the diver and declared she was not suffering from DCI but she was taken to hospital where it was determined she was hypoxic and she was put on continuous oxygen. An x-ray had found extensive lung 'mottling'. The diver was transferred to a high dependency unit where she stayed for two nights and was treated with pressurised oxygen therapy and continuous oxygen. Once the diver was able to maintain good oxygen saturation levels on her own she was discharged.

March 2015 15/191

A diver surfaced from a shore dive to 14m for 30 min with problems in his left ear. Unable to equalise, the diver sought medical advice and was told to report to a medical centre. The doctor at the centre noticed that the diver had some barotrauma in both ears and the diver was told not to dive until the problem cleared.

May 2015 15/087

A student on a training course began to feel dizzy, cold and was shivering. It was reported the student had not had breakfast that morning nor had taken enough fluids and had told a fellow student she had been feeling dizzy all week. Although the student was responsive and coherent, oxygen was administered and she was taken to a recompression chamber.

May 2015 15/054

A distressed diver was spotted on the surface by a nearby boat. The boat was unable to reach the diver so issued a 'Mayday' call which another boat picked up and reported to the Coastguard. The Coastguard was unable to initially locate exactly where the 'Mayday' signal had come from and the boat, which had originally raised the alarm, rushed ashore and called an ambulance. An air ambulance was immediately deployed and recovered the diver from the water. The diver was flown to hospital but his condition was not clear.

May 2015 15/059

A diver caught his fins on the A-frame of a RHIB and twisted his knee as he was getting back into the boat following a dive. The diver didn't think it was too bad and did not require attention. He carried out a second dive but during this he felt more pain in his knee which he thought was due to his knee swelling or finning action which aggravated the injury. The diver was able to get himself back into the RHIB without assistance and no first aid was required but he informed the dive manager that he would not dive again that weekend.

May 2015 15/092

While carrying out a shore dive to 20m a diver felt uncomfortable and experienced breathing problems. The diver went for the surface and his buddy attempted to slow the ascent. They reached the surface with a dive time of 11 min. The diver suffered bleeding to his left eye. He stated that he had experienced problems with this eye some years before.

May 2015 15/217

An instructor and his trainee were on her first open water shore dive. As they carried out an alternate source ascent from 6m the trainee suffered ear problems and the dive was aborted. The dive time was 6 min to a maximum depth of 6m. The student went to a medical centre and was informed she could no longer dive for the duration of her dive course and would need to see her own doctor for another medical prior to any further diving.

June 2015 15/069

A hardboat had different groups of divers aboard and due to the windy conditions took them into a sheltered bay to dive. The boat was positioned facing outwards from the shore with a rock to the right. The dive plan was to enter the water, swim towards the rock, descend and dive around the rock. A diver and her buddy, a newly qualified diver, were the second pair to enter and were on the surface by the rock when a squall of wind pushed the boat towards it. The skipper immediately stopped other divers entering the water, shouted to those in the water to keep clear and tried to manoeuvre the boat away from the rock and the divers but the wind, tide and their position made this difficult. The diver's buddy was in a position where he was not in any danger but as the boat moved towards the diver she tried to descend to get under the boat but was limited by a rocky ledge beneath her. The hull of the boat pushed her back up to the surface and she was trapped between the rock and the boat's hull but was released very quickly by the skipper using an oar to push the boat out of the way. A snorkel diver entered the water to provide support. The diver was conscious and said that she had swallowed water as her regulator had been pulled out during the incident and thought, as she was in pain, that she had cracked a rib. The snorkel diver organised that the diver's buddy be helped by another diver already in the water and towed the injured diver to the boat. They and all the other divers were recovered by the boat lift. The diver was checked over by a diver from the other group who was a GP. A decision was made between the GP, the diver and the skipper that emergency services were not required. The boat immediately returned to harbour and the diver was taken to hospital where it was confirmed she had two fractured ribs but had no other injuries.

June 2015 15/068

A diver had completed a hardboat dive to 13m for 40 min. Due to worsening weather conditions the skipper halted diving. He briefed the divers not to stow kit on benches but on the deck and to 'hang on' for their return to port. During the journey back in a rough sea the diver felt sick and decided to get up to go to the toilet. Before a warning could be given, the diver stood up and then fell hard on his hip. The other divers checked the diver who said he had hip pain so they kept him as still and comfortable as possible during the remainder of the return journey. The skipper called the Coastguard with a request for an ambulance to meet the boat when it arrived back in port. On arrival the ambulance crew took charge and the diver was taken to hospital. He had suffered a hip fracture and remained in hospital for about a week following an operation.

June 2015 15/104

A diver was fully kitted and walked towards the water's edge with his fins on in order to enter down some steps. As he walked forwards he stepped onto the front of his left fin with his right foot and fell backwards onto his cylinder with his full weight. The diver got up and felt well enough to dive but afterwards he began to feel back pain. The diver drove home but the following morning he had considerable pain in his back and, unable to walk without the aid of a walking stick, he made an emergency doctor's appointment. The doctor diagnosed severe bruising and a possible fracture to his coccyx and carried out blood tests to ensure there was no kidney damage. The diver was diagnosed with severe kidney bruising but no longer term damage. The diver was prescribed pain killers for a month and had to walk with a stick for several weeks. He was also instructed not to dive, drive or drink alcohol for at least four weeks.

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June 2015 15/074

An instructor and his two students were carrying out a shore dive and had planned to carry out some training drills. As the group descended a cliff face the instructor could see bubbles rising from a diver below. As they got closer they saw the diver was on her own and appeared to be holding on to the cliff face at 20m and was in some difficulty. The instructor approached the lone diver and signalled to ask if she was 'OK'. The diver did not respond and appeared distressed so the instructor signalled to go up but again there was no response. The instructor signalled 'Up' to his students, took hold of the lone diver and they all started to ascend. The instructor could feel that the lone diver was negatively buoyant so put some air into her BCD to assist with the ascent. As soon as they began the ascent the diver signalled that she had a problem with her ears and wanted to stop. The group paused for a moment and then began to ascend. The diver signalled again that she had a problem with her ears and wanted to stop. With what appeared to be the lone diver suffering a bad case of reversed ear, the group continued the ascent in a series of stops and starts and took about 8 min to reach the surface with a dive time of 14 min. When the group had come across the diver at 20m she had about 140 bar in a 12 lt cylinder and when they surfaced this had reduced to around 50 bar. The instructor made the lone diver buoyant and kept hold of her as they swam to shore. The instructor asked the diver where her buddy was and she replied her group had gone in 'en masse' and that she didn't have a buddy. Once she had started to descend she had experienced ear problems and had signalled to the group that she was going to ascend on her own. Having left the group she then found that she could not ascend because it caused severe ear pain. The incident was reported to the dive site staff who said they would try and have a word with the lone diver's group.

June 2015 15/081

A group of divers in two RHIBs had carried out a morning dive and moored in a shallow bay for lunch. During the break the swell produced some awkward movement and one of the divers began to feel seasick. The dive boats moved to the second dive site and the swell and confused sea state continued to make the boat uncomfortable. As divers prepared to dive, the diver was sick over the side of the boat. He felt completely debilitated so another diver cox'd the boat, monitored the divers in the water and kept a watch on the sick diver. The diver subsequently fully recovered and admitted to having changed his seasickness management regime on that day.

June 2015 15/077

A diver in difficulties was brought to the surface following a dive to 20m. The casualty was recovered by the rescue boat. The casualty had stopped breathing and CPR was given. The emergency services were called to the scene. The casualty regained consciousness. A helicopter arrived within about 10 min of the diver being landed on shore however she was transported to hospital by a land ambulance.

July 2015 15/223

A buddy pair had carried out a RHIB dive to 21m for 44 min including stops. After a surface interval of 2 hours they dived a reef at 18m. As he entered the water using a backward roll, one of the divers experienced a sudden rush of cold water into the right hand side of his hood. Whilst not painful it was uncomfortable but did not concern the diver to the point of aborting the dive. The diver descended with only mild discomfort in his ear but when he reached 18m the pain increased and was constant as the diver breathed in and out. The diver signalled his buddy, they aborted the dive and surfaced with a dive time of 11 min to a maximum depth of 18m including a 3 min safety stop at 6m. The diver was taken to a doctor who confirmed a perforated eardrum and his advice was to keep the ear dry and avoid the Valsalva manoeuvre to rest the eardrum. The doctor was confident the diver would make a full recovery and be able to dive again following a medical examination.

July 2015 15/095

A diver and his buddy were the last pair on a dive boat to carry out a morning wreck dive to a maximum depth of 27m. They had been tasked to send up the shotweight on a lift bag at the start of their dive. They found the shotweight in a crack on the wreck so the diver had to lift it out before they could put air in the lift bag to send it up. The weight was heavy and the diver had to heave hard to remove it from the crack. The pair then carried out their dive and deployed a DSMB. They ascended and carried out a 2 min decompression stop plus a 3 min safety stop at 6m and surfaced with a dive time of 40 min. After the dive the diver felt sore and weak in his right shoulder but thought no more of it and carried out a second, shallow dive to 11m for 19 min in the afternoon. The following morning the diver's shoulder still felt sore and weak and the dive manager recommended that the diver contact a recompression chamber. At the chamber a doctor diagnosed a mild DCI in the diver's shoulder although the symptoms were not conclusive. As a precaution the diver received recompression treatment for five and three quarter hours. Following treatment the diver's shoulder felt marginally better. The diver was re-examined by the doctor, who confirmed a minor DCI in the diver's shoulder. It was thought that lifting the heavy shotweight had been a contributory factor. The soreness in the diver's shoulder subsided and strength returned over the next few days. The final assessment was that the injury was due to gardening.

July 2015 15/149

A dive boat issued a 'Pan Pan' requesting medical advice after a diver had slipped after feeling faint when getting ready for a dive. The diver had fallen and hit his head and had been briefly disorientated and possibly lost consciousness. The dive boat had only just put divers in the water so was unable to take the diver to shore. Medical advice had been sought and the diver was monitored until the divers surfaced and the boat then returned to shore. The diver was advised to seek medical advice from his doctor. (Coastguard report)

July 2015 15/227

A trainee and his instructor had entered the water from a boat and were about to descend when the trainee complained of chest pains. The trainee was recovered back aboard the dive boat and the pain decreased. The trainee was taken to a medical centre. Whilst being examined he was informed that his existing nose problems, which he had broken in the past, would require further treatment before he could dive again.

August 2015 15/116

Two air divers were carrying out a reef dive from a boat. They made a fast descent to 21m and became separated so made rapid ascents to the surface. Finding each other on the surface the divers re-descended to a maximum depth of 25m. Around 18 min into the dive and on their ascent, one of the divers lost buoyancy control at about 10m and made a buoyant ascent to the surface. Separated from his buddy again, the second diver made a fast ascent during which he developed a severe headache which became worse on the surface. Back aboard the boat, the diver's headache became severe so he was put on oxygen and the Coastguard contacted. The diver remained on oxygen for the boat's journey back to harbour, which took around forty minutes, and his headache improved. An ambulance took both divers to a hyperbaric facility where the buddy was cleared and it was reported that the diver was diagnosed with an oxygen 'hit'. He was discharged three hours later and cleared to dive.

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August 2015 15/115

Whilst playing a ball game using snorkel equipment in a swimming pool, a player hurt his hand when he tried to stop another player. The snorkeller had grabbed the other player's leg as he swam away and his fin kicked and bent back the snorkeller's hand, middle and ring fingers which caused them to swell. The snorkeller went to an A&E department six days later because his hand was still hurting. After an x-ray, the hospital suspected a fracture and an appointment was made at the fracture clinic the following day. At the clinic it was revealed that the snorkeller had pulled the ligaments in his hand and was told use it gently for a while.

August 2015 15/109

An instructor and his two trainees had carried out a dive to 21m for 53 min with a 1 min stop at 10m and a 3 min stop at 6m. After a 2 hour 23 min surface interval the group dived again. They made a controlled descent to 21m, carried out their dive and began their ascent up a wall to 10m where they conducted a 1 min safety stop. One of the trainees indicated an ear problem and to ensure an easy ascent, the instructor deployed his DSMB. The reel had two attachments which the trainees used and the group ascended face to face to 6m where they carried out a 3 min stop. During this both trainees let go of the reel and maintained their buoyancy well. The instructor gave the signal to ascend and the group moved up to 3m but the trainee who had indicated an ear problem dropped down 1m and was 'fiddling' with her ear. The instructor signalled her to ascend but she dropped down further and the instructor dumped all his buoyancy and went after her. The trainee was now dropping rapidly but the instructor caught hold of her at 15m. The trainee was in distress, had not put air in her BCD, and by the time the instructor had sorted out her buoyancy and his own they were at 19m. The troubled trainee grabbed the instructor's BCD and he carried out a controlled buoyant lift. The pair surfaced, with a dive time of 38 min to a maximum depth of 21m, to rejoin the second trainee who had ascended from 3m and monitored the incident from the surface. The trainee had a small amount of blood in her mask and she complained of a sore ear. Once ashore and de-kitted, the instructor offered oxygen to the trainee. This trainee was a nurse on an ENT ward; she felt she had not suffered significant damage to her ear and, although sore, it was only bruised.

August 2015 15/120

It was reported that a diver carrying out a wreck dive was at 50m when he sustained a serious burn to his lower back. The diver was wearing a therapeutic heat pad under his drysuit to provide relief for muscle spasm. The report said that as the diver 'vented' his drysuit using his oxygen enriched dive gas the heat pack exploded after reacting with the dive gas. The diver was in severe pain but aware that if he ascended in panic he could suffer DCI, he conducted a 20 min ascent to the surface. He was given first aid by the crew and other divers on the dive boat and the alarm raised with the Coastguard. A lifeboat met the dive boat and transferred the diver to the shore where he was rushed by ambulance to hospital. The diver was released from hospital later that evening but his burn was so severe that he returned the following day for a skin graft. (Media report).

August 2015 15/166

A group of four divers were carrying out a shore dive. A trainee dived with her instructor accompanied by a student with his instructor diving a rebreather. They planned a pleasure dive and the opportunity during the dive for the trainee to complete the next part of her course. The entry was down a steep pebble beach. The swell minimal but the trainee fell over getting in and panicked. The trainee was helped by the group and towed out of the swell to calmer water and assisted to put on her fins. The trainee was stressed but the group reassured and calmed her down and she agreed to continue the dive. The trainee struggled on the descent as she was wearing a thicker shorty suit over her wetsuit than the last time she had dived. She was given an extra 2 kg to help her descend and the group carried out their dive. The trainee completed mask clearing skills and reached a maximum depth of 9m. After 25 min they swam back towards the shore and at 6m, while her instructor held the DSMB, the trainee completed an alternate air ascent exercise acting as the recipient for the student and his instructor. The exercise went well and they all surfaced with a dive time of 39 min to a maximum depth of 9m. On the surface the trainee had to orally inflate her BCD and struggled as she thought it was not inflated even though it was. Her instructor got the trainee to put her regulator back in but as they all swam to the shore, which was about a hundred metres away, she said she was uncomfortable and tired so her instructor suggested she lie on her back and he would provide a tow. As the tow proceeded the trainee became agitated and was shouting that she could not breathe, her suit was too tight on her chest and she removed her regulator. Both instructors insisted she kept it in but the trainee was panicked and would not listen. As her instructor continued the tow with the student alongside, his instructor swam ahead to raise the alarm and the Coastguard was contacted. It took approximately 10 min to get the trainee to the shore where she was recovered from the water. Her shorty suit was removed and her wetsuit unzipped when the trainee said it was restricting her. She was put on oxygen and laid down but was not responding and her finger tips and lips had turned blue so an ambulance was called. The Coastguard arrived and, with the trainee losing consciousness at times, said they were going to call a helicopter but on hearing this the trainee panicked again as she had a fear of flying and the helicopter was cancelled. The ambulance arrived and the paramedics believed the trainee, with a lung capacity of approximately 25%, had aspirated a great deal of water. A hyperbaric chamber was contacted by one of the divers and given details of the incident. The duty doctor spoke to the paramedics and the trainee was taken to hospital where an x-ray showed fluid in the lungs but no medical treatment was necessary. She was discharged later that evening and fully recovered.

September 2015 15/167

A lifeboat was launched following two separate reports of a diver in difficulty and apparently struggling with strong tides. It was reported that the diver was recovered unconscious by a lifeboat, taken ashore where paramedics carried out CPR and he was taken by ambulance, under police escort, to hospital. The lifeboat, Coastguard team and police remained on the scene to see if anyone else was still in the water but after an extensive three hour search the services were satisfied the diver had been alone. (Media report).

September 2015 15/174

An instructor and his two students had de-kitted in the water following a pool training session and handed up their equipment, except mask and fins, to a helper at the side of the pool. The instructor demonstrated an exit by placing his hands on the poolside, finning upwards, turning and finishing in a sitting position. The instructor got back in the water, watched as his students copied his demonstration and he then exited the water. When the instructor and students were sitting in a line on the poolside the instructor noticed that one of the students was holding his bicep and looked uncomfortable. The instructor asked the student if he was 'OK' and the student replied that his hand had slipped on the exit. As they were leaving the pool the student mentioned his discomfort again and hoped he would be able to go to work the next morning as he had a manual job.

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September 2015 15/173

A diver was on an instructor training course and after a pool session, whilst wearing flip-flops and carrying a cylinder to a car, her foot slipped on a wet floor. The diver stumbled causing the cylinder valve to tear her jeans on her right mid thigh and cut her leg. The wound was more of a graze than a deep laceration although about 4 cm long. The diver declined first aid but used antiseptic wipes. The injury did not appear to affect the diver for the rest of the course.

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Boating & Surface Incidents

October 2014 15/004

Three divers were aboard a RHIB when an electrical fault caused engine failure. The Coastguard was alerted and a lifeboat towed the RHIB back to shore. (Media report).

October 2014 15/247

Lifeboat launched to locate missing diver(s). Resolved unaided. (RNLI report).

October 2014 15/249

Lifeboat launched to assist dive boat. (RNLI report).

November 2014 15/013

An examiner and four candidates were on a diver cox'n assessment carrying out exercises in approaching a gently shelved shingle beach by a harbour wall. Two of the candidates had completed the exercise but on the third candidate's attempt the RHIB grounded. The candidate had approached the shore and deployed a crew member into the shallow water to hold the bow steady. As the crew member moved round from the bow to re-enter the boat a passing cargo ship's bow wave hit the boat. The crew member was lifted off his feet and the boat turned parallel to the shore. As the crew member was recovered into the boat another wave caused it to ground on the shingle bank. Subsequent wave action rocked the boat which resulted in water coming over the RHIB's tubes swamping the boat. The boat became firmly grounded on the bank. The examiner put two of the candidates into the shallow water to wade out and set an anchor line from the bow and he also set an anchor to the shore. As it was a rising tide the expectation was that the bow would be held in place by the anchors and the boat would eventually float off the shingle. The crew off-loaded equipment from the boat to the shore. The examiner, candidates and visitors on the shore attempted to push the RHIB's bow seaward but with little effect. The Coastguard was contacted with a request to tow the RHIB off the beach so it could then be driven on the plane to drain the water and allow the assessment to continue. A lifeboat arrived and towed the RHIB off the bank with the examiner and a candidate aboard. The three remaining candidates on the shore were given a lift back to the harbour. When the tow was released from the lifeboat, an attempt was made to get the RHIB up on the plane to clear the water but one of the boat's engines stalled and as the second engine was about to do the same, it was switched off. The lifeboat resumed a tow of the boat and took it back to a mooring in the harbour where the water was bailed out. It was confirmed the following day that water had got into the fuel but there was no apparent damage to the boat, engines or electrics.

December 2014 15/134

A dive boat called the Coastguard requesting assistance. There was one crew member on the boat and one rebreather diver who was missing following a wreck dive to 26m. The Coastguard tasked a lifeboat, harbour pilot launch and a cross channel ferry to assist in the search for the missing diver. The pilot launch located and recovered the diver who had become tangled in his DSMB line as he ascended. It was reported that no decompression stops had been missed. (Coastguard & RNLI reports).

January 2015 15/135

The Coastguard was contacted by a dive boat that had suffered engine failure and drifted away from ten divers in the water. The boat had anchored and requested help recovering its divers and then a tow to safety. A lifeboat attended the scene, recovered all the divers and returned them to the dive boat. A lifeboat crew member transferred to the dive boat to rig the tow gear and the boat was towed back to port. (Coastguard & RNLI reports).

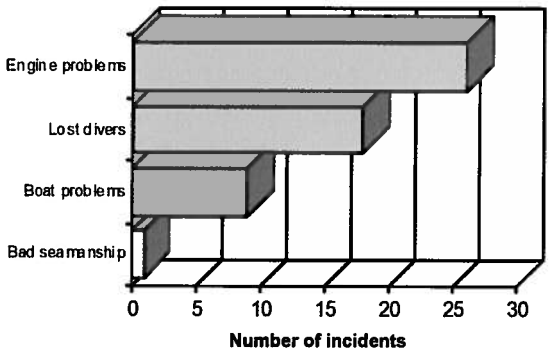
February 2015 15/250

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

March 2015 15/036

A dive boat alerted the Coastguard to report that two of their divers had failed to surface and were missing. A search was carried out involving a lifeboat, rescue helicopter, two warships, a police launch and another dive boat. The divers, who had been caught in a current and drifted away from the diving area, were located safe and well by the lifeboat. They were taken ashore and checked by a waiting ambulance crew. (Coastguard & RNLI reports).

Analysis of boating & surface incidents



April 2015 15/046

Lifeboats were called out after the Coastguard received a 'Mayday' call from two dive RHIBs that had broken down. Their exact position was difficult to establish due to poor radio reception. A local vessel had also received the distress call and had responded. It located the RHIBs and towed them to a safer location to await the lifeboats. An inshore lifeboat was the first to reach the divers and established that no one was in any immediate danger. An all-weather lifeboat arrived shortly afterwards and most of the divers were transferred aboard. The two disabled RHIBs were towed back to their launch site where all the divers were landed safely.

April 2015 15/196

A group of two buddy pairs, diving in two waves, were carrying out a search and survey exercise from a RHIB. 20 min into the dive of the first wave of divers the RHIB's engine failed and would not restart. The RHIB was down tide of the shotline, the anchor deployed and the Coastguard contacted. By the time the anchor had been deployed the RHIB had drifted approximately 300m away from the shotline. The first pair of divers surfaced

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with a DSMB up tide of the RHIB and were able to swim towards it. The engine was restarted and the divers recovered. The boat was taken on a five minute trip to check the engine was working properly. The decision was taken to carry on with the dive and the engine remained working for the remainder of the dives. The Coastguard was stood down and thanks given for their assistance.

April 2015 15/251

Two lifeboats launched to assist dive boat with engine problems and missing diver(s). Ten people and craft brought in. (RNLI report).

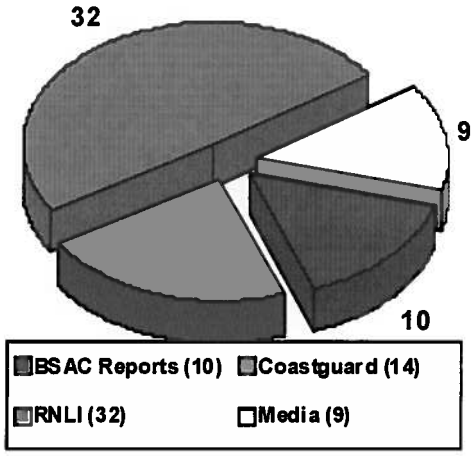
April 2015 15/252

Lifeboat launched to assist dive boat with engine problems. (RNLI report).

April 2015 15/064

A diver was rescued by a lifeboat after her boat broke down. (Media report).

Boating & surface incident report source analysis



May 2015 15/073

Three divers entered the water from their dive boat to dive a wreck inside a harbour wall near a main shipping channel. The wreck was sometimes marked with buoys attached to the bow and stern of the wreck but on the day of the dive there was also a buoy marking a crab pot lying closer to the channel. Thinking that this was the wreck marker, the divers followed this line to the bottom and found the crab pot so they attempted to locate the wreck following a bearing but the current was flowing in the opposite direction and took them towards the shipping channel. The divers followed their safety procedures, deployed a DSMB and carried out a 3 min stop at 5m but had now drifted into the shipping entrance. At this time a harbour pilot had boarded a ninety metre tanker approximately one nautical mile from the shipping entrance. The tanker, with a draft of 5.4m, was proceeding into the harbour via the channel when the pilot spotted the divers and DSMB in the water. The pilot boat approached to assist but the divers' boat arrived and recovered them from the water. The inbound tanker altered her course and was able to enter through another shipping channel. The harbour authority said that had the tanker been a larger, less manoeuvrable vessel and timings a little different, this may have resulted in a serious incident. They intended to mark the bow of the wreck with a designated buoy and to produce a detailed handout to help avoid the situation happening again.

May 2015 15/137

The Coastguard received a 'Mayday' from a dive boat reporting two overdue divers. A helicopter and two lifeboats assisted in the search for the divers. A dive RHIB in the area located and recovered the divers who were transferred to one of the lifeboats and taken ashore. (Coastguard & RNLI reports).

May 2015 15/138

A dive RHIB reported an electrical failure and contacted the Coastguard for assistance. A broadcast was made to any vessels able to assist and the dive boat was towed back to shore. (Coastguard report).

May 2015 15/065

A diver was swept out to sea after the engine on his dive boat failed. Unable to pick up the diver and then losing sight of him, the boat raised the alarm and lifeboats and a rescue helicopter were scrambled to search for him. More than an hour later the diver was located by a lifeboat and was found to be safe and well but a little cold.

June 2015 15/255

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

June 2015 15/079

A dive RHIB travelled to a wreck site with six divers aboard. In the group was a boat handling instructor and a trainee cox'n who had completed a boat handling course. On the way to the site they carried out a 'man overboard' drill using a buoy at which point the steering failed with the wheel at the helm no longer connected to the RHIB's 135 hp engine. However, the boat could still be controlled at low speeds, up to about 8 knots, by manually turning the engine. The RHIB's auxiliary 9.8 hp engine was still available as a backup. After some discussion a decision was made not to dive the wreck and the boat diverted to a sheltered dive site behind a breakwater which was appropriate for the limited control of the boat. Contact was made with the harbour authority and permission to dive was given. All the divers completed their dives and the boat returned to shore at a maximum speed of 8 knots. The steering failure was later identified as having been caused a broken steering cable.

June 2015 15/142

The Coastguard received a call regarding a missing diver from a beach site. The diver had been missing for thirty minutes. A helicopter was immediately tasked to carry out a shoreline search together with lifeboats and a rescue boat from a local vessel. Coastguard rescue teams were tasked to liaise with other members of the diving party and carried out a land based shoreline search. A lifeboat spotted the missing diver safe and well at the base of a nearby cliff. (Coastguard & RNLI reports).

June 2015 15/256

Lifeboat launched to assist dive boat that was out of fuel. (RNLI report).

June 2015 15/105

A hardboat's dive ladder, of central spine aluminium construction, when not in use, was stored on its side along the boat's portside gunwale and held in position by a wooden shaft.

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Everyone using the boat was made aware that the ladder was not a railing and should not be leant on at any time. Whilst travelling out to a dive site a diver leant on the ladder with the result that the shaft broke, the ladder dropped into position and the diver fell overboard. The boat stopped immediately and the diver, who was still holding onto the ladder, climbed back aboard and removed his mobile phone and his electronic car key from his pocket. The diver was unhurt and the boat continued to the dive site.

June 2015 15/257

Two lifeboats launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

June 2015 15/145

A dive boat reported that three sets of divers had deployed DSMBs on their second dive but one of the divers had not put up his DSMB. With no sign of bubbles in the water, the diver was reported as missing. This was the second dive of the day with the first to 25m, the second to a maximum depth of 10m with a run time of 60 min. Lifeboats and a helicopter were tasked to the area. The diver's DSMB was located by one of the lifeboats and the diver recovered safe and well. (Coastguard & RNLI reports).

June 2015 15/235

A group from a club were running a RHIB refamiliarisation weekend using the club boat. All crew were equipped with drysuits and either BCDs or Lifejackets. During a man overboard drill where one of the crew was playing the role of the man overboard the boat's engine failed and was unable to be restarted. The remaining crew soon lost sight of the overboard crew member and so the coastguard was alerted. The coastguard tasked a number of lifeboats and a search and rescue helicopter. The overboard crew member was located by a lifeboat and recovered from the water. He was checked over by medical personnel and allowed to return home. The broken down boat was towed back to harbour to be recovered and was subsequently found to have contaminated fuel.

July 2015 15/100

A buddy pair carried out a shore dive to 10m on spring tides, which was their third dive of the day. After a short time one of the divers surfaced to check their position leaving his buddy on the seabed. The diver descended and tried to follow his buddy's bubbles to get back down to him but a strong current made this impossible and he surfaced to wait for his buddy. After about 5 min the buddy had still not surfaced and the diver, who was being swept along by a fast flowing current, grabbed hold of a pot buoy and signalled to the shore cover. A member of the shore cover asked a local dive boat to assist and around five minutes later the boat recovered the diver and then searched for the missing buddy. Others ashore had seen the diver on the pot buoy signalling distress to the shore party and called the Coastguard who deployed two lifeboats and a helicopter. Some 10 to 15 min later the buddy deployed a DSMB, carried out a 3 min safety stop and surfaced with a dive time of 25 min. He was recovered into the dive boat and the Coastguard stood down.

July 2015 15/258

Lifeboat assisted in the search for missing diver(s). Resolved unaided. (RNLI report).

July 2015 15/171

A dive boat, with its engine running, was being launched from its trailer on a slip with the cox'n in the boat and three drysuited divers in the water to assist. One of the stern lines that held the boat on the trailer had not been fully removed and the boat rotated sideways as it slid off the trailer and bounced on the concrete causing damage to the engine's skeg and minor gel coat damage to the hull. One of the divers slipped when holding the boat and the cox'n was unable to reverse quickly enough when the boat rotated. The divers quickly regained control of the boat and pulled it to a safe position on a pontoon and successfully used it for diving that day.

July 2015 15/147

A dive boat reported to the Coastguard that they had a missing diver. Before search and rescue was initiated the diver was found safe and well. (Coastguard report).

July 2015 15/259

Two lifeboats launched to assist dive boat with engine problems. (RNLI report).

July 2015 15/148

The Coastguard received a report that a dive RHIB had suffered a gear box failure. A pilot boat proceeded to the scene but a lifeboat that had diverted from an exercise, located the RHIB and took it safely under tow back to shore. (Coastguard & RNLI reports).

July 2015 15/260

Two lifeboats launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

July 2015 15/094

The Coastguard received a 'Pan Pan' call from a dive boat reporting that a diver, who had been diving a wreck, was missing. Lifeboats, two helicopters and several local vessels were involved in the search and rescue operation. After 2 hours of searching a local vessel located the diver four miles from his original location. The diver was reported safe and well. He had made a normal ascent to the surface and separated from his buddy. The diver was transferred to a lifeboat then airlifted to hospital and later discharged.

July 2015 15/097

Four divers had planned a wreck dive. They arrived on the site but as there were other boats on the wreck's marker buoy they drifted off while the first pair of divers kitted up. As the boat prepared to drop the divers off at the buoy the engine would not start so the dive was aborted. The divers investigated the fault, changed the plugs and fitted an alternate fuel line but still the engine would not start. The other boats had now left the site so the divers called the Coastguard but one station did not respond and then the divers heard from another station loud and clear, although that station had a problem hearing the dive boat clearly. Eventually a lifeboat was launched and towed the dive boat back to shore. The divers later found a carburettor fault.

July 2015 15/143

The Coastguard received a report that a RHIB had a missing diver. A lifeboat and helicopter were tasked to search. The diver was located safe and well by another vessel and taken ashore. (Coastguard & RNLI reports).

July 2015 15/261

Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

July 2015 15/262

Lifeboat launched to assist diver. (RNLI report).

July 2015 15/123
A lifeboat was launched after a hardboat with 13 people aboard had run aground. The boat had become stranded in shallow water but soon after the lifeboat was launched they were informed that the vessel had floated off into deeper water but had sustained damage to one of its propellers. The lifeboat continued to the scene and escorted the vessel back to her shore base.

August 2015 15/151
The Coastguard tasked a lifeboat and helicopter to a search for a missing diver after a report from a RHIB that a diver had not surfaced on time. A 'Mayday' broadcast was also made and other vessels tasked to assist. A search plan was passed to all vessels and eventually the diver was located safe and well by one of the vessels. The diver required no medical attention and all units were stood down. (Coastguard & RNLI reports).

August 2015 15/150
A dive boat reported they had a missing diver. The Coastguard tasked a helicopter and lifeboat for a search but before they arrived on the scene the diver was located by a work boat. The helicopter paramedic checked the diver for medical issues but they were found to be safe and well. The search was stood down. (Coastguard report).

August 2015 15/263
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

August 2015 15/264
Lifeboat launched to assist dive boat with engine problems. Craft towed in. (RNLI report).

August 2015 15/265
Lifeboat assisted in the search for missing diver(s). Resolved unaided. (RNLI report).

August 2015 15/266
Lifeboat launched to assist swamped dive boat. Craft brought in. (RNLI report).

August 2015 15/128
A RHIB with four divers aboard was on a wreck site when the engine failed. The divers deployed an anchor and, as their VHF radio was not working, phoned the Coastguard. The Coastguard made a VHF broadcast to all vessels requesting assistance with a tow but, with no vessels in the immediate area, a lifeboat was launched. Once the lifeboat was underway a passing fishing vessel had confirmed the exact location of the dive boat. The lifeboat arrived on site and passed a tow line to the boat. The boat recovered their anchor and they were towed back to port.

August 2015 15/245
A group completed an uneventful days diving from a club RHIB. During the last dive whilst remaining on station the engine was noticed to be making some knocking noises. During the return to harbour the engine cut out and could not be restarted despite several attempts. The vessel was close to a prominent rock and the group were concerned that they would drift onto the rock and so deployed a sea anchor and contacted the Coastguard. Whilst in communication with the Coastguard a small fishing vessel noticed their problem and offered a tow back to harbour. Unfortunately the sea anchor could not be recovered and appeared to be snagged on the seabed and had to be cut free to allow the tow. As the boat approached the pontoon the towing vessel cut the stricken RHIB free and the group swam the RHIB alongside the pontoon and secured it. The Coastguard was contacted to confirm safe arrival back at port.

August 2015 15/127
It was reported that a small dive boat, with one person aboard, had lost power as it headed back to shore around 9.45pm and had begun to drift towards rocks. The dive boat quickly raised the alarm and a lifeboat was scrambled to the scene. Another lifeboat, on a training exercise nearby, was also paged and attended the scene but was not required. The dive boat had been able to deploy an anchor before it ran aground and it was towed back to safety by the lifeboat. No one was injured in the incident. (Media report).

September 2015 15/126
A dive boat issued a 'Mayday' call after a diver surfaced from a wreck dive and reported losing sight of his buddy. The Coastguard requested assistance of lifeboats, a search and rescue helicopter, a Naval Air squadron and Royal Navy frigate which was patrolling nearby. The diver was wearing a personal locator beacon and was found conscious and waving after a signal from his beacon identified his position. The Navy vessel launched their rescue boat and recovered the diver. After a quick check, the diver was transferred to the rescue helicopter and taken to hospital for routine medical checks and released later that evening. (Media report).

September 2015 15/241
A dive group deployed a shotline onto a wreck. Whilst checking its position and then recovering the shot two powerboats involved in a race passed within 50-100m despite the boat making radio calls to warn them to avoid the area. The A flag was deployed whilst they re-shotted the wreck. More boats were seen on the horizon and the Coastguard was called on channel 16 asking them to advise race control about diving activities and request the fleet avoid the area. As the shotline was redeployed for a third time four more boats passed close by despite the crew waving the A flag, which was ignored. The fleet is reported to have been monitoring channel 37 for safety traffic.

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Ascent Incidents

October 2014 15/018

Two divers carried out a boat dive on a wreck at 26m. They descended the shotline and below 15m it was completely dark so torches were needed. One of the divers noticed that his buddy was having problems with his drysuit's shoulder dump valve and signalled to him. When the diver saw the valve was in the closed position he fully opened it. After 15 min the buddy signalled to ascend so the diver prepared and deployed his DSMB and then noticed the buddy was on his way up and it was too late to stop him. The buddy reported that prior to the ascent he had closed the dump valve by mistake and when the DSMB had been deployed he made a rapid ascent up the DSMB line to between 15 and 10m by which time he had re-opened the valve and dumped air from his drysuit. This had slowed his ascent to the surface but his momentum was such that he was unable to stop. On surfacing, with a dive time of 20 min, he was picked up by the dive boat and the diver, who had missed a safety stop, surfaced a few minutes later. When the buddy was checked he was showing no symptoms and the decision was made not to put him on oxygen but the diver contacted the Coastguard for advice as the boat headed back to shore. Having been given all the dive details the Coastguard called back after ten minutes to check on the buddy's condition. Back on shore the Coastguard called again and spoke to the buddy passing on the diving medical advice they had been given that he should not dive again that day.

November 2014 15/269

Five divers descended down a slope; they were divided into two buddy pairs with the instructor leading. One student was positioned with his buddy at the back of the group. At approximately 9m this student signalled a problem with his mask but he seemed to resolve the problem and continued his descent. As they reached 10m the student came into an upright position and was seen signalling a problem with his mask. The student ascended by 2m. The instructor signalled to him to deflate his BCD to slow his ascent. The student returned an OK signal but still continued to slowly ascend and so the instructor followed him. At 6m the student had not resolved the problem and so the instructor made an audio signal to the group for them to follow them both up to the surface. By this time the other divers were at 8m. The student made a more rapid ascent to the surface and the instructor followed more slowly. On the surface the surface cover had entered the water to assist the student out. The instructor regrouped the rest of the students. An alternative instructor entered the water to continue the dive with the remaining students. Whilst out of the water the student was advised to breathe oxygen as a precaution. The student refused the oxygen several times and did not show any signs of problems. During the evening there were reports that the student had been drinking and had to be assisted by the divers into their accommodation. The student did not arrive to dive the next day and the instructors received messages from the student reporting he had suffered large nose bleeds during the night and that he was in hospital with sinus and cranial nerve damage.

November 2014 15/019

A group of divers were carrying out shore dives. Two of the divers entered the water, headed out and deployed a shotline in 6m. They descended and laid a distance line from the shot to an underwater feature for the rest of their dive group to use. The maximum depth of their dive was 20m. The surface cover saw a DSMB come up 30 min after the divers had entered the water and 5 min later one of the divers surfaced and gave the 'OK' signal to the surface cover. There was no sign of his buddy so the assumption was made that the diver who had surfaced had ascended from his safety stop while his buddy was waiting to complete his stop. After five minutes the buddy had still not surfaced so divers were put in the water to swim out and bring the diver back to shore to find out what had happened. Meantime the oxygen equipment was prepared. Four minutes later, as the rescue divers reached the diver, the buddy surfaced and all returned to shore. The diver who surfaced alone had made a rapid ascent from 10m so was put on oxygen and assessed but no signs or symptoms of DCI were present. The buddy made a call to a diver helpline and gave them the full dive details. The diver was re-checked and still had no signs or symptoms. The helpline called the buddy back and said they saw no need for further action. The diver was taken off oxygen, de-kitted and told to relax for the rest of the day.

November 2014 15/020

A group of eight divers, five students, one instructor and two divemasters, carried out a shore dive as part of a deep dive training course. One of the students was using his own equipment apart from a hired drysuit and 15 lt cylinder. He was diving with a divemaster and was the last to descend down the shotline to 33m. As the group moved away from the shotline, the student looked uncomfortable and his buoyancy control was not as good as it had been on previous dives. The divemaster elected to return to the shotline with the student, where the student panicked, switched to his alternate source and ascended quickly up the shotline. The divemaster managed to slow the ascent by venting the student's BCD and the student took the divemaster's alternate source. With a total dive time of 7 min, the student surfaced and was unresponsive. First aid and oxygen were given and the emergency services took over when they arrived on the scene. The student later said that he had experienced 'wet breath' after a slow descent to depth that he was unfamiliar with the hired equipment and his mask had also been leaking.

January 2015 15/030

A diver and his two buddies entered the water with a plan to swim out from the shore to a shotline and descend. When they reached the shotline they could see around four divers below, at 6m, so the diver decided to swim to a nearby wall and use that instead as a reference point for their descent. The diver told his buddies that this was what they were going to do and to stop at about 16m. On the descent the diver looked up, saw his buddies 2m above him and continued his descent to 16m. The diver looked up again and saw that one of the buddies appeared to be struggling with his buoyancy and descended past him very quickly. The second buddy was going after the first buddy but the diver signalled him to stop and the diver went down after the first buddy. The buddy had arrived on the bottom at 24m and was struggling with his BCD inflator. He had changed from his primary to his alternate regulator, had a mask full of water and was breathing rapidly. The diver immediately started a controlled buoyant lift on the buddy and signalled to the other to ascend with them at the same time. The lift was controlled and the buddy, although breathing a little fast, was alright but at around 5m the diver lost control of the lift and they made a fast ascent to the surface. On the surface the diver raised the alarm. He reassured the buddy and asked if he had any pain to which the buddy responded saying he had one in his left knee. The diver began a tow to shore with the other buddy finning alongside. A rescue boat arrived, passed the diver a rope and towed him and the buddy back to shore where other divers assisted them out of the water. The buddy was put on oxygen, handed over to a first responder and was taken by

ambulance to hospital. The diver checked himself and the other buddy to make sure they had no symptoms. The total dive time was 2 min with a maximum depth of 24m and the reason for the fast ascent from 5m had been due to the buddy, who was being rescued, ditching his weightbelt.

January 2015 15/028

An instructor and her student had completed a shore dive to 20m for 30 min. After a 90 min surface interval the pair dived to 15m and ascended to 6m. As they practised alternate supply skills at 6m the student's octopus regulator failed, the instructor had a regulator free flow and they made a rapid ascent to the surface. Their dive time was 20 min. The instructor had slight chest and shoulder pains. Oxygen was administered but there was no change in her condition.

February 2015 15/006

About 9 min into a dive, a rapid ascent was made from 19m. One of the buddy pair was put on oxygen.

February 2015 15/086

Two rebreather divers had carried out a shore dive, one of the divers made an uncontrolled ascent and missed his safety stop. His dive time was 63 min. The diver said he had carried out a no stop dive as he was feeling cold. The buddy, who was a diving physician, said the ascent was not fast. Both divers, who had red warning lights on their handsets, were put on oxygen for 10 min as a precaution.

February 2015 15/035

A buddy pair carried out a shore dive and reached a maximum depth of 20m but 19 min into the dive and at 16m one of the divers became buoyant when he tried to turn around and air migrated to the feet of his drysuit. The diver began to drift upward so the buddy grabbed the diver's BCD but accidentally took hold of the integrated weight pouches which released and fell to the seabed. The buddy grabbed the diver. He then grabbed the weights and tried to return them to the diver but was unable to lift them so let them go and attempted to slow the diver's ascent. The buddy let go of the diver who made a rapid head first ascent to the surface with a dive time of 20 min. The buddy made a controlled ascent and surfaced two minutes after the diver. The shore cover recovered the divers, administered oxygen and contacted a hyperbaric chamber who advised that the divers should go to hospital for a check up. Both divers were discharged from hospital with no ill effects.

March 2015 15/190

An instructor carried out a drysuit training shore dive with two students. They carried out skills in 3m and then descended to 20m to continue their dive. One of the students signalled to his fellow student that he was having breathing problems and then panicked and made a rapid ascent. The fellow student and instructor slowed the ascent and surfaced within computer limits with a dive time of 16 min to a maximum depth of 20m. On the surface the student said he was 'OK' but he was coughing. He was taken to an exit point and he managed to leave the water unaided. The student was assessed and seemed to be alright until he coughed up blood. At this point he was laid on his back and oxygen administered. Medical advice was sought and the student was advised to go to hospital for a chest examination. An ambulance was called and arrived just prior to an air ambulance landing. After further examination carried out by the critical care doctor on the helicopter and the ambulance crew, the diver was released with a recommendation not to dive for a minimum period of forty-eight hours.

April 2015 15/089

A buddy pair carried out a dive to 22m. As they ascended one of the divers lost control of his buoyancy at 16m and made a fast ascent to the surface with a dive time of 34 min. The diver's buddy ascended and stopped for 1 min at 6m before surfacing. Oxygen was administered but on an air break the diver had 'pins and needles' in his feet and numbness in his left hand. A hyperbaric facility was contacted and the diver advised to attend.

April 2015 15/047

A buddy pair conducted a shore dive to 10m for approximately 35 min. They ascended to 6m to carry out their safety stop and one of the divers deployed her DSMB. Just after this the diver began to ascend slightly feet first so performed the inversion recovery technique several times whilst slowly ascending. During these inversions the diver had kept hold of her DSMB reel and the line had tangled around her regulator and pulled it out. Her buddy noticed, gave the diver her octopus regulator and they ascended the remaining 1m to the surface. The shore cover saw them surface clearly in some difficulty. Other divers, in mask and fins, were sent out to ensure the divers' safety and towed them back to shore. Back on shore the divers were assessed, given liquids and suffered no ill effects following the dive.

April 2015 15/136

The Coastguard was contacted by a dive charter vessel who had two divers that had made a rapid ascent from 33m with a dive time of 22 min. Medical advice received was that the divers be taken to the nearest port where they would be transferred to hospital. A Coastguard rescue team were waiting for the dive boat and they transferred the divers to hospital due to the unavailability of an ambulance. (Coastguard report).

April 2015 15/051

A group of four divers were carrying out a shore dive and descended a shotline to a small wreck at 27m. Photographs were taken and then the group swam single file through the wreckage. Three divers exited the wreck but the fourth diver did not appear so an immediate search was carried out. With no sign of the missing diver the three divers made an immediate ascent including a safety stop. The missing diver, using nitrox 32 and with a 12 lt side mount cylinder, had descended with the group to the wreck and carried out a routine regulator switch but got a mouthful of water. He swapped back to his initial regulator but still with a mouthful of water, panicked and made a rapid ascent to the surface. Contact with the other three divers was immediately made when they surfaced. Back ashore the diver sought medical advice. His dive profile was checked and his total dive time was 5 min. He was advised no treatment was required unless he developed any symptoms but he was also advised not to dive for the next twenty-four hours.

April 2015 15/052

A group of three divers carried out a boat dive to a wreck at 21m and towards the end of the dive two of them prepared and deployed a DSMB for the group's ascent. Whilst doing so they did not notice that the third diver had ascended by himself in an uncontrolled manner. The incident was captured on the third diver's head mounted video camera which showed that he had become distracted as he tried to switch off his new torch. As he worked out which switch to use he had lost control of his buoyancy and made a rapid ascent from 15m to the surface with a dive time of 26 min. The diver was recovered aboard the dive boat and given oxygen as a precaution for thirty minutes. The diver was fine and showed no symptoms of DCI after being monitored for twenty-four hours.

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May 2015 15/214

A buddy pair carried out a reef dive from a dive boat. One diver was using nitrox 27 and the other air. The divers entered the water and descended to 22m where the nitrox diver checked his alternate source regulator and that he could reach his isolation valves on his 10 lt twin-set as he was using a different harness for the first time. The divers signalled 'OK' to each other and set off on their dive. After swimming for a short time, the nitrox diver burped, was sick and took in a mouthful of water. He tried to blow the water out through his regulator but taking a breath in he got another mouthful of water which went down his throat and made the diver start to cough. The diver panicked at not being able to breathe after two attempts and fully inflated his BCD. The diver thought he was ascending and tried to breathe out but his lungs were empty and he could do nothing but dry retch and cough and at some stage he lost his regulator. His buddy had seen the diver struggling for breath so he grabbed hold of the diver's BCD and took him to the surface. They ascended in about 30 sec from 22m with a dive time of 5 min. On the surface the diver took a large breath and coughed a little. The dive boat was immediately alongside and recovered the divers aboard. They were both put on oxygen, the Coastguard was informed and an ambulance was dispatched to meet the boat at a local harbour. The paramedics took the divers off the oxygen and said they didn't know anything about diving related incidents so the divers gave them the number of a hyperbaric chamber. The chamber doctor spoke to the paramedics and then to the buddy. He asked the divers to carry out simple breathing exercises over the phone. Both divers felt no discomfort and with no damage to their lungs and the dive being only 5 min, the doctor did not diagnose DCI. The doctor recommended that the divers not dive within the next twenty-four hours and they were released from the ambulance. The divers were checked later at a medical centre, which repeated the chamber doctor's advice not to dive for twenty-four hours and to call if any symptoms appeared.

May 2015 15/058

A diver had a new 12 lt twin-set. He had carried out training dives in freshwater and seawater to check his weighting but he had felt a little light towards the end of these dives and agreed with his instructor to carry an extra 2 kg on the next set of sea dives. On the first boat dive of the day and with full cylinders of nitrox 32, the diver added the extra 2 kg to his pocket and completed the dive with no buoyancy issues. Before the second dive a new drysuit diver on the dive boat needed some extra weight and the diver gave them the 2 kg weight from his pocket and replaced it with a spare 1 kg weight lying in the boat but did not mention this to his buddy. The diver had not re-filled his twin-set cylinders after the first dive and had about 70 bar in each. The diver and his buddy dived a wreck at 23m and had ascended to the top of the wreck at 10m where the diver deployed his DSMB. He had dumped nearly all the air in his drysuit and was neutrally buoyant but a loop of the line caught on his heavy metal DSMB reel and the diver started being dragged up so he let go of the reel and swam back down to the wreck. He held onto the wreck but did not signal to his buddy he had any buoyancy issues as he thought he would be able to dump enough air to control his ascent with no mandatory stops required. The buddy deployed a DSMB and the diver positioned himself to dump air from his drysuit shoulder dump but quickly became too buoyant and could not slow his ascent to the surface. His dive time was 41 min. The dive boat quickly recovered the diver, put him on oxygen and notified the Coastguard who put them through to a hyperbaric chamber. The diver spoke to the duty doctor who recommended he attend the chamber as a precautionary measure. The diver arrived at the chamber an hour after surfacing and following a series of checks was cleared by the doctor.

May 2015 15/061

Two divers had carried out a boat dive to 16m. On their ascent they deployed a DSMB at 13m with one diver holding the reel as the other inflated the DSMB using her alternate supply regulator. The regulator became trapped in the DSMB and the diver made a rapid ascent to the surface missing a safety stop. Her dive time was 33 min. Both divers were recovered to their dive boat and the diver who had made the rapid ascent was put on oxygen for around 20 min. The diver was monitored for symptoms of DCI for several hours but suffered no ill effects.

May 2015 15/060

A buddy pair, both experienced divers and instructors, were trying their manifolded twin-sets in the sea for the first time. The site chosen was 17m, conditions were benign and their dive plan was to practise skills and get comfortable with their sets and buoyancy. At the beginning of the dive one of the pair's BCD wing harness seemed a bit loose so her buddy helped to tighten it. During the dive the buddy started his skills practice and then noticed the other diver clinging to a rock. The diver signalled she had lost a weight pouch and the buddy went over, held onto her and dumped air to make them both negatively buoyant. Both divers had started the dive over-weighted so the buddy felt confident they could carry out a controlled buoyant lift but the diver wanted to retrieve her weight pouch so they crawled along the bottom towards it. The buddy could not get the weight pouch back into the diver's harness so he clipped it to her, deployed his DSMB and they started to ascend. The slightly loose wing harness combined with the unstable clipped on weight pouch caused the diver to lose control of her buoyancy and she inverted. The buddy dumped his air and dragged the diver back to the bottom where she indicated she wanted to hold the pouch to make the ascent so the buddy unclipped it and handed it to her. At this point the diver's primary regulator free-flowed with such force that it blew out of her mouth. She managed to retrieve and replace the regulator but breathing was difficult and she did not see her buddy offering his alternate supply due to the bubbles caused by the free flow and her focus on getting air. The diver dropped the weight pouch, the buddy threw his DSMB aside to avoid entanglement, let go of the diver and she made a rapid ascent and surfaced with a dive time of 30 min. The diver was quickly picked up by the dive boat and given oxygen. The buddy surfaced and was recovered aboard the boat. The Coastguard was contacted and they put the boat through to a hyperbaric facility who recommended that the diver come in to see them. The boat returned to shore and the diver was driven to the hyperbaric chamber where she was assessed and, a couple of hours later, was given the 'all clear'.

June 2015 15/075

A diver had carried out his first dive of the day to 18m and at 40 min had run out of air. The diver made a rapid ascent from 12m and was recovered to the dive boat. The diver was struggling to breathe, was being sick and had blood from their nose. The diver was put on oxygen and the dive boat issued a 'Pan Pan' call. A Coastguard helicopter was scrambled and airlifted the diver to a recompression chamber. (Coastguard report).

June 2015 15/090

A student had carried out a 12m shore dive for 20 min. After a 90 min surface interval he descended with his instructor to a wreck at 18m. The student was uncomfortable at depth and they made a fast ascent. Their dive time was 2 min. As they swam back to the shore the student was sick. He was taken to a first aid room, changed and sipped some water. Oxygen was administered for 12 min. The student had no symptoms of DCI and was advised to take it easy, avoid heavy lifting and to contact the dive centre if his condition deteriorated.

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July 2015 15/242

Two divers conducted the first dive of the day to a maximum depth of 13m for a total dive time of 35 min without incident. After a surface interval of 2 hr 20 min the pair descended to a wreck at a maximum depth of 16m. During the dive one of the divers experienced some difficulty maintaining control due to buoyant feet in her drysuit as she was not wearing ankle weights that she had used during her initial training. She also had one fin strap which was loose and her drysuit boot size was too large allowing excess air to accumulate. After some time coping with her problems the dive leader decided to abort the dive and deployed a DSMB. During the ascent the diver lost control of her buoyancy and ascended feet first to the surface with her buddy continuing to try and control the ascent. Both divers were recovered onto the boat and after other divers in the group surfaced approximately 10 min later both divers were placed on oxygen as a precaution. Subsequently the diver noted that she had lost one of two 1 kg weights she had placed in her BCD pockets at some point after the start of the first dive.

July 2015 15/098

An instructor, accompanied by an assistant instructor, was carrying out a shore dive with a trainee. A quarter of the way through their dive and as they were swimming along a wall at 20m they saw a drysuited diver in distress at 16m. He was upside-down and clawing at the wall while his buddy was hovering two metres away just watching. The instructor signalled to the diver's buddy to help him, but he just shrugged. The instructor signalled the assistant instructor to buddy up with the trainee and she swam to assist the diver with his buoyancy. She pulled the diver's legs down, dumped air from his drysuit and then carried out a controlled buoyant lift. The assistant instructor and trainee ascended with the instructor and diver while the diver's buddy ascended a few metres away. The assistant instructor had a fast ascent warning on his computer when the trainee became positively buoyant at about 10m due to focusing on the rescue taking place and they missed a safety stop. As soon as the whole group reached the surface the diver and his buddy quickly swam away back to shore. The instructor, assistant instructor and trainee had surfaced with a dive time of 25 min and a maximum depth of 20m. The instructor later saw the diver and his buddy in the dive site car park. The diver claimed to have been trained so the instructor advised him to raise an incident report and recommended that he should not dive again that day as they had made a quicker than normal ascent. The status of the buddy was unknown as he did not volunteer any information other than he thought that the diver had been 'playing around'.

July 2015 15/099

A buddy pair were diving from a hardboat and had carried out a dive to 17m for 49 min with a decompression stop at 5m for 3 min. After a 2 hour 30 min surface interval they descended to 14m. After 7 min one of the divers lost a 7 kg weight pouch from his harness and started to rise. The diver dumped air but as he tried to control the ascent he surfaced quickly in approximately 15 sec. The diver was picked up by the hardboat. The diver's buddy found the dropped weight pouch, ascended, completed a safety stop and surfaced with a dive time of 18 min. The diver was put on oxygen and monitored closely for 40 min but suffered no ill effects. The diver's harness was examined and the Velcro flap that held the weight in place was worn and did not properly secure the weight.

August 2015 15/231

A student carried out a shore dive on a training course. He descended and at 18m felt his regulator was not giving him any air. An instructor gave his octopus regulator to the student but he still didn't get any air and headed for the surface. The instructor managed to hold onto the student until 7m and then they both quickly surfaced with a dive time of 7 min to a maximum depth of 18m. The student and the instructor were both put on oxygen for approximately 15 min.

August 2015 15/156

A dive boat contacted the Coastguard and reported that one of its divers had made a rapid ascent from 30m. A connect call was facilitated between the duty dive doctor and the boat. Following the call the vessel returned to shore. Another connect call between the doctor and boat was made and it was decided to take the diver by car to a hyperbaric chamber for assessment. (Coastguard report).

August 2015 15/158

A dive boat reported to the Coastguard that they had a diver aboard who had carried out a dive to 54m with a dive time of 33 min but had missed 18 min of decompression stops. The boat still had other divers down so could not move from the site until they were back in around fifty minutes. The diver was treated aboard and it was reported they had no pain but slight discomfort in the arms. The vessel and casualty refused medical advice and assistance and said they would seek advice from hyperbaric chamber once ashore. (Coastguard report).

August 2015 15/236

A pair of divers prepared to carry out a dive on the fourth day of a diving trip. Whilst kitting up one diver discovered she had mislaid her ankle weights that she normally wore. The diver decided to continue the dive without them and started the dive without making any adjustments to her weighting to compensate for the absence of the ankle weights. The pair conducted a normal descent to a maximum depth of 20m during which the diver felt cold and so added gas to her drysuit. During the dive the diver did not realise that the pair had made a steady ascent to 14m and at about 18 min she lost buoyancy control and made an uncontrolled ascent to the surface. On surfacing, the diver was assisted back into the boat and the skipper administered oxygen for a total of 20 min. Her dive computer was checked and no errors or warnings were recorded. No signs of any adverse symptoms were identified. Her buddy conducted a normal ascent and completed the safety stops requested by his dive computer and surfaced without incident.

August 2015 15/279

Two divers accidentally went into decompression time. One of them deployed his DSMB intending for them to ascend. The diver's DSMB reel jammed and he was dragged up to 10m until he let go of the reel. He descended to 24m to meet his buddy and they went up together to complete the decompression stop. They were low on air and at 5 bar they agreed to ascend although they had not finished the last 3 min of the decompression stop. On the boat an instructor placed the divers on oxygen and monitored them for any signs or symptoms of DCI. They appeared to be fine. Their maximum depth had been 25m.

August 2015 15/129

A group of divers were on a diving trip using a RHIB. The trip leader had to return home due to family illness and the alternate leader was the cox'n, who was not diving as he felt he had flu. The cox'n had dropped divers in the water for a reef dive but while they were underwater the engine had fuel starvation problems and he had trouble restarting it. He tried to use the anchor but there was no rope attached, only chain. All

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the other ropes, usually used as shotlines, were not in the boat as they had been taken off earlier that day by another diver to sort out. There were no oars in the boat, which could have got it to shore in the benign conditions that day. A DSMB surfaced and the cox'n managed to restart the engine and he motored towards it. One diver appeared on the surface and was watching his buddy below who was slowly ascending and carried out a safety stop at 6m. The diver was also cursing his new reel which he then threw away and it sank. There was a gap between the reel and the reel's frame and when the diver had released the line it had become jammed in the gap and locked the reel. The diver had tried to let go but became entangled with the reel and was quickly pulled up from 20m to the surface missing decompression stops. His computer registered an ascent alarm but had not locked out and the dive logged was for 18 min to a maximum depth of 32m. Back in the boat the diver showed no symptoms but was put on oxygen as a precaution. The diver's buddy surfaced; he had carried out a safety stop. The boat returned to port and the problem with the engine was diagnosed as a small leak in the fuel pipe under the engine cowling which had been sucking in air. This also meant that fuel was spraying around a hot engine which could have resulted in a fire. The engine had known problems on a trip two weeks prior to this event and had been serviced a week or two before that but the fuel line problem had not been identified.

August 2015 15/232

A buddy pair carried out a shore dive to 29m. On their ascent one of the divers became buoyant at 26m as he was unable to vent his BCD. The buddy managed to control the ascent from 15m and they surfaced with a dive time of 27 min to a maximum depth of 29m with no decompression stops. The divers were given oxygen but with no symptoms were asked to remain on the dive site for at least an hour and if any symptoms did appear to contact a member of staff on the site.

September 2015 15/238

A diver conducted a first dive of the day to a maximum depth of 25m without incident using a 15 lt cylinder and 3 lt pony and using 11.4 kg weight. He then conducted a second dive of the day onto a wreck to a maximum depth of 24m using twin 8.5 lt cylinders and 9.5 kg weight. On reaching the bottom it was evident that the diver was under-weighted and air became trapped in the feet of his drysuit and he made a rapid ascent to the surface with a total dive time of 3 min. The diver was recovered onto the boat and monitored for symptoms with no ill effects evident.

September 2015 15/168

A diver using nitrox 32 and his buddy on air were carrying out a wreck dive from a dive boat. They descended the shotline and at 10m the diver checked his equipment and felt the clip of his right hand weight pouch had come loose. Unable to re-fix it on the descent the diver waited until he arrived on the wreck at 23m. The diver indicated the problem to his buddy but in the low visibility he could not understand the diver's signals. The diver decided to remove the weight pouch and clip it to his BCD. The only clip available was on the diver's left side which made him lie horizontal on the wreck with all the weight on one side. The diver became concerned about his breathing rate so signalled to his buddy to ascend but communication was hampered by the low visibility so the diver decided to deploy the DSMB himself, which was successful. The diver began to ascend but at about 17m he lost buoyancy control and made a rapid ascent to the surface with a dive time of 16 min to a maximum depth of 23m. The diver was recovered aboard the boat. He reported his rapid ascent but his computer had not locked out and although he had no symptoms, other than being exhausted, he was monitored by the skipper and other divers. While having lunch 90 min later the diver's left hand fore finger knuckle felt tender and he thought he must have knocked it while aboard the boat. The following morning the pain was still causing concern so the diver rang a hyperbaric chamber and explained the symptoms to a duty doctor. The doctor suggested painkillers and called the diver back an hour later to check on his condition. Four days later the diver's knuckle was still slightly swollen.

September 2015 15/233

A pair of divers conducted a dive to a maximum depth of 36m for total dive duration of 16 min. At a depth of 35m one diver was having difficulty leaving the bottom to begin his ascent. His buddy went to assist and managed to get him off the bottom but the diver then had a fast ascent direct to the surface. During the ascent the diver lost his mask at a depth of around 27m. On the surface the diver reported that he felt OK but just a bit sick. The diver was given oxygen but otherwise suffered no ill effects.

September 2015 15/175

A diver was finning along the bottom at approximately 20m when, about 25 min into the dive, his 6 kg integrated weight pouch slipped out of his wing BCD. With help from his buddy the diver recovered the pouch but was unable to fit it back in position. The diver signalled to ascend and the buddy deployed his DSMB. The diver was struggling with his trim as he ascended as the weight pouch was difficult to hold in one hand. The divers ascended to about 10m but with one hand holding the weight pouch the diver was unable to dump air quickly enough from his drysuit and wing BCD and made a buoyant ascent. On the surface, with a dive time of 30 min to a maximum depth of 23m, the diver signalled the dive boat for help; his buddy had ascended with him. They were recovered to the boat and the diver was put on oxygen as he had a headache. The boat returned to port but the diver remained on the oxygen while a call was made to a hyperbaric chamber for advice. They advised the diver be taken to hospital where he was examined by an A&E doctor and found to be free of any symptoms. The doctor consulted the hyperbaric chamber and it was determined that the diver remain on oxygen as a precaution. 6 hours after surfacing and having been on continuous oxygen, the diver was discharged from A&E and advised not to dive for seven days.

Technique Incidents

October 2014 15/005

Two divers, using nitrox 27, had dived a wreck at 27m for 32 min, they then became separated at 24m in low visibility. After a 30 sec search both divers deployed their DSMBs, ascended independently and were recovered to their dive RHIB without further incident. The cause of the separation was reported as a communication misunderstanding when one of the divers stopped to take photos.

October 2014 15/008

Two divers had entered the water for a planned boat dive to 8m for 25 min. The plan included a circular search and to lift the shot at the end of the dive. Carrying an SMB, the divers began their descent, in poor visibility, but at 2m one of them had a flooded mask and stopped to clear it. Her buddy had continued down the shotline and was out of sight but the diver could feel him on the line and see his bubbles so continued to descend. The buddy had looked back up the shotline and could just make out the diver in the poor visibility. He ascended slightly to confirm she was alright and, as she was descending, he turned and continued his descent to the bottom. Once there he located the lift bag on the shot and immediately put in some air but over-filled it so the bag began to rise and he felt himself being pulled upward. The diver who had had the flooded mask arrived on the bottom and found her buddy with his back to her. Because the visibility was so bad she kept one hand on his cylinder and looked over his shoulder to see what he was doing. She realised that he had fully inflated the lift bag and just released it but she could also feel him being pulled up with the shot. In the poor visibility the buddy had failed to notice the slack shotline caught under his BCD. He dumped air from his drysuit and managed to disentangle himself. As the diver was holding onto his cylinder and able to pull him back down, the buddy ascended no more than 1 to 1.5m. They exchanged 'OK' signals and without the shot, which had arrived at the surface, there was no datum point for the circular search. The diver attached a short buddy line between them and they set off on a course she selected in nearly zero visibility. The diver felt her buddy rising up so turned to see what he was doing. He gave the 'OK' signal which she returned and pulled him back down to her. The buddy gave another 'OK' signal but they both realised they were nearly at the surface. The buddy had noticed they were both ascending but was unsure why. On the surface it was discovered that the SMB had become tangled around the shotline causing the ascent. Once at the surface, with a dive time of 5 min, the diver inflated her BCD, disconnected the buddy line and indicated to her buddy that the dive was over.

October 2014 15/207

Two divers carried out a boat dive to a reef at 35m. There was a current running and the visibility was low. At around 10 min into the dive at 35m one of the divers lost sight of his buddy's torchlight and could not relocate him. Both divers carried out separation procedures and one of the divers deployed a DSMB. It was clear to the boat cover they had separated and were about 5m apart. The diver who deployed the DSMB surfaced followed by his buddy 30 sec later. Their dive time was 13 min to a maximum depth of 35m. Both divers were recovered to the boat.

March 2015 15/037

Two groups were carrying out two different training dives from the shore at the same time. About 100m out from the shore an instructor was working with two trainees at 6m when 20 min into the dive he became separated from one of them due to the very poor underwater visibility. The instructor and one trainee surfaced and tried to signal the problem to the shore cover. At about the same time the second group of two instructors and two trainees were practising controlled buoyant lifts and towing. On surfacing one of the trainees, acting as the rescuer, yelled 'help, he's dying, he's dying' rather than using a practice word. The shore cover were trying to work out what had happened with the first group when they heard the shout from the second group and, not having been fully informed regarding the training drill, panicked, prepared the oxygen kit and called the Coastguard. The missing trainee from the first group surfaced shortly after the instructor and other trainee and this group returned to shore where the instructor confirmed that all the divers were safe. The emergency services were informed that it was a false alarm and to call off the rescue.

March 2015 15/045

A group comprising an instructor and three students had done a shore dive to 6m for 6 min and carried out controlled buoyant lift exercises. After a surface interval of just over two hours, during which the instructor had taken another trainee on a 20 min dive to 10m, the group carried out a second training dive to 21m. The dive plan included one student working with the instructor on SMB use and the other two students were buddied together to carry out a line laying exercise and a simulated decompression stop. The line laying was carried out between 19 and 21m and when completed the group ascended a wall to a 6m shelf where the simulated 1 min decompression stop was planned. During the ascent the instructor realised that one of the students involved in the line laying exercise was no longer with the group. The ascent continued to 6m where there was no sign of the missing diver nor was he visible on the surface above. The instructor signalled the two students to remain on the 6m shelf and he descended down the wall but was unsuccessful in locating the missing diver. The instructor returned to the two students and with a dive time of 24 min, they all ascended. At the surface they saw the missing diver exiting the water some fifty metres away. The missing diver said that he had a free flow during the ascent around 10m and rather than take his buddy's alternate source regulator he had opted to surface instead and thought he had signalled this to his buddy. The student was reminded about 'out of air' and 'separation' procedures, which had been briefed before the dive. He was also advised that he should have remained on the surface above the rest of the group where he would have been visible to them from below or he could have tugged on the SMB line to indicate his position and used the SMB as a flotation aid if required.

March 2015 15/043

A dive manager was present during an instructor and his trainee's buddy check and she recorded details of their planned shore dive. The dive manager was distracted during this by another buddy pair about to enter the water and left the instructor and trainee to take the other pair's dive details. Whilst she was doing this the instructor entered the water with his drysuit zip open. He exited the water swiftly and safely.

March 2015 15/194

A pair of divers carried out a boat dive and descended the shotline to the seabed. They moved about a metre away from the shotline before one of them deployed a DSMB. The DSMB had been deployed up tide of the shotline and had become tangled with it. The divers were unaware of this and carried on with their dive. The diver holding the DSMB could feel it pulling and thought it was because the wind and current were against him. This ended up with the divers aborting the dive and they

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ascended to 6m to carry out a safety stop. At this point the current caused the buddy to separate from the diver who was still holding onto the DSMB reel. The diver reached the surface the same time as his buddy with a dive time of 24 min to a maximum depth of 18m and both were recovered to their dive boat.

April 2015 15/195

Three divers carried out a RHIB dive to 29m. The group comprised a dive leader using nitrox 28, a diver carrying a pony bailout cylinder for the first time and on his third dive in a drysuit and a second diver. The group descended and the dive leader waited on the bottom with the first diver for the second diver, who was slow to descend, to finally join them. During the dive the first diver began to experience buoyancy issues getting used to his drysuit but when asked by the dive leader if he was 'OK' he responded immediately and seemed confident enough to resolve the situation. At the end of the dive, and preparing to ascend, the dive leader positioned both divers together in front of him and signalled to ascend which they acknowledged. During the ascent, the second diver was reeling in the SMB but the first diver started to sink down due to being over-weighted and used a cycling motion to fin up. This caused a very slow ascent and the second diver became more buoyant and had to constantly fin down to prevent a rapid ascent. The dive leader took the reel from the second diver and signalled for both divers to hold the SMB line to control their buoyancy, which they did. The group continued their ascent to 6m to carry out their safety stop with both the divers struggling to hold their position even though they had hold of the SMB line. Due to the weight on the line the SMB had now sunk underwater. The first diver then let go of the line and descended. The dive leader tried to maintain sight of his bubbles so as not to lose him whilst also monitoring the second diver. The first diver returned a short time later clutching a fin under his arm. He had lost it at the 6m stop but not indicated this to the dive leader. As the fin was just below him the diver let go of the line to retrieve it but, due to being over-weighted, he had descended. With the group back together the dive leader let go of the SMB and gave the signal to ascend. At this point the second diver became more buoyant but the dive leader managed to take hold of him and pull him down. While this was happening the first diver ascended to the surface slightly quicker than normal. The dive leader, still holding onto the second diver, lost sight of the first diver and he and the second diver ascended to the surface with a dive time of 33 min to a maximum depth of 29m. All the divers were recovered to the RHIB and had no ill effects although the dive leader was reported to have been clearly shaken by the dive.

April 2015 15/197

A diver had ascended from a 30m wreck dive and started his decompression stops. The plan was for a maximum of 10 min decompression and a dive time of 40 min. The diver conducted a 1 min stop at 16m and 10 min stop at 5m. He surfaced with a total dive duration of 44 min. He had not correctly understood the function of his new computer and this caused the extended dive duration.

May 2015 15/215

A buddy pair had planned a boat dive to 42m. On reaching 31m one of the divers, using nitrox 23, started to feel the effect of narcosis and was giving incorrect gauge readings to his buddy who was diving nitrox 24. The pair made a decision to ascend having deployed a DSMB. On the ascent the diver was constantly dumping and filling his wing BCD to maintain buoyancy control. The divers carried out mandatory decompression and safety stops and arrived on the surface with a dive time of 21 min to a maximum depth of 31m.

June 2015 15/218

Two divers carried out a boat dive to a wreck at 25m. Towards the end of the dive at 17m, one of the divers was looking at part of the wreckage and when he turned around found he had lost sight of his buddy. The diver put on his torch, did a 360 deg turn, looked for his buddy's torchlight and bubbles but was unable to locate him. He then moved to a part of the wreck at 15m where he could deploy his DSMB. The diver ascended and surfaced with a dive time of 34 min to a maximum depth of 25m. He signalled the dive boat he was 'OK'. They were recovering his buddy who had also deployed a DSMB and surfaced about 20 sec before the diver.

June 2015 15/220

A group of divers carried out a RHIB dive to a wreck at 35m. The brief stipulated a surface to surface time of 40 min with a depth limit of 35m and a decompression stop time limit of 5 min. All the divers were asked to run the plan on air on their computers and the maximum no stop time was 11 min. A buddy pair, one using nitrox 27 and the other nitrox 23, entered the water, carried out their dive and ascended. The diver using nitrox 27 had two computers and his primary showed no decompression but there was still decompression left on his second computer so the divers carried out stops for 1 min at 9m, 4 min at 6m, 3 min at 3m and the computer then clicked into a 5 min safety stop. This resulted in the divers surfacing with a dive time of 49 min to a maximum depth of 35m, 9 min later than briefed. Interrogation of the divers' computers showed that although they had run the plan on their computers for air as briefed they had dived with their computers set for nitrox 27 and nitrox 23.

June 2015 15/219

A diver using air and his buddy using a rebreather, carried out a boat dive to a wreck at 30m. All divers had been briefed that the maximum decompression allowed was 10 min. The divers were briefed to run a plan on their computers to confirm they could carry out the dive. The diver ran the plan but on a nitrox 32 setting. He noticed his mistake and changed his computer setting to air but did not re-run the dive plan. As a result the diver accumulated 11 min of unplanned decompression and surfaced with a dive time of 43 min.

June 2015 15/070

A buddy pair surfaced with a DSMB following a dive to 17m for 39 min including a 3 min safety stop. Between leaving their safety stop and arriving at the surface one the divers had lost his fins. The diver was wearing a borrowed pair as he had lost a fin the previous day. As the diver had one fused ankle it was thought his finning technique may have caused him to kick the fin straps loose. When he realised his fins had gone, the diver held onto the inflated DSMB and his buddy signalled the boat regarding the lost fins but that they were both 'OK'. The buddy towed the diver to keep them out of shallow water and the dive boat had to wait to pick them up as another buddy pair were directly below them recovering the fins. Once the area was clear the boat picked up the buddy pair.

June 2015 15/274

Upon surfacing from a dive, a student failed to establish positive buoyancy. The instructor noticed that the student didn't have a regulator in his mouth and she believes his mask was taken off as well. As a result, the student started sinking vertically towards the bottom of the lake, which in the area was about 4m deep. The instructor reacted immediately asking the assisting colleague to look after the other student while she focused on reaching the casualty as quickly as possible. Once the instructor made contact with the casualty she started the

ascent and at the same time tried to bring the casualty back to a head-up position. The casualty was given the instructor's alternate air source. The casualty seemed to be conscious all the time, his eyes were open and, once the alternate source was in his mouth, the instructor noticed that the casualty was looking at her and blinking. Upon reaching the surface the casualty didn't hold on to the instructor's regulator. The instructor inflated the casualty's BCD and positioned him on his back. The casualty was responsive but the instructor noticed blue around his lips. The instructor called for help, kept reassuring the casualty and tried to make their way towards the exit. The surface support helped to remove the casualty from the water and took over from that point while the instructor turned her attention to the other diver. The casualty was administered oxygen while waiting for the arrival of the emergency services.

June 2015 15/275

A student on a dive turned and knocked her mask. Her mask dislodged and let in water. The student inhaled water and began to panic. She spat out her regulator and was provided with an alternate source by another diver which she took and placed in her mouth. The diver took hold of the casualty, controlled the panic and began to ascend. On the surface the casualty was coughing and was distressed. Oxygen and first aid were administered until the air ambulance arrived. The maximum dive depth was 16m.

July 2015 15/225

Divers were conducting a drift dive from a boat to a maximum depth of 20m with a dive time 20 min. The weather was moderate to rough with 1 to 2m waves and strong south westerly onshore winds. A pair of divers descended the shotline with an SMB. They drifted according to plan but slowly began to move inshore and up a gulley. Approximately 16 min into the dive the divers had moved within 50m of the rocky shoreline and, if they had moved any further in, recovering them by the boat would have been difficult. The dive manager made the decision to recall the divers, despite them being on a safety stop and due to surface, so they could be recovered without risking the boat or the divers. The recall system was a carabiner with a 'diver recall' note attached, dropped down the SMB line and 4 tugs given on the SMB, which was acknowledged by the divers. The boat reversed away from the divers who surfaced within 1 min and they were quickly recovered aboard so the boat could move away from the rocky shoreline.

July 2015 15/201

A diver was using air and carrying nitrox 50 as a decompression mix. A boat dive was planned on ox-stop tables with the intention to dive on computers with the slate plan as a backup. The dive manager then decided that the dive was to be carried out using the slate plan and not the computer. A diver failed to run the dive plan on his computer or switch into gauge mode. As a result, along with an inadequate ascent rate in line with the computer's requirements, the diver and his buddy surfaced 8 min after the expected surfacing time due to decompression requirements from their personal computers. The divers surfaced with a dive time of 38 min to a maximum depth of 39m with a 1 min stop at 12m, a 1 min stop at 9m and an 8 min stop at 6m.

July 2015 15/119

A candidate was on an instructor exam and he and his examiner, using a rebreather, were diving from a hardboat. They descended a shotline to around 30m where the conditions were dark, visibility was poor and there was more current than had been expected. The plan had been to follow a jackstay line attached to the base of the shotline towards a second shotline for their ascent and, as they followed the jackstay, to stop and explore a reef at the base of a wall or any wreckage they found. As he followed the jackstay the candidate turned around to check on the examiner when his legs and fins became tangled in the jackstay which, although close to the seabed, was not taut The diver was unable to free himself but remained calm and waited for the examiner to assist, which she did. Shortly afterwards they reached the second shotline and because of the incident, the candidate cut short the planned bottom phase of their dive and they both ascended. The candidate switched to a stage cylinder of nitrox 50 at 6m. A planned exercise involving the examiner bailing out from her rebreather to open circuit was cancelled as the examiner had exerted herself more than normal when she untangled the candidate. The divers carried out a 5 min stop at 6m and surfaced with a dive time of 30 min to a maximum depth of 33m.

August 2015 15/278

The student was 75m through a 200m swim as part of a water skills assessment when he got into difficulty in a water depth of 2m. A lifeguard threw a buoyancy aid to the casualty and jumped in to bring him to the poolside. It appeared that the casualty had swallowed some water and was coughing. The casualty was observed for some time afterwards but it was decided he did not need medical attention.

August 2015 15/243

A pair of divers entered the water from a RHIB, rolling in off opposite sides, onto a shotline at an offshore site. The prevailing weather and sea conditions were poor and the current was still running on the surface. One diver became entangled in both the lazy shot and his buddy's equipment. As the diver tried to free himself he pulled the regulator from his buddy's mouth, twisting the mouthpiece, which was not identified until a subsequent dive. The divers decided to abort the dive.

September 2015 15/280

An instructor took a student for a dive from the shore. Towards the end of the dive the student indicated that he wanted to surface. At the surface it turned out that the student was out of air. The instructor provided the student with her alternate air source and her BCD to lean on, then orally inflated the student's BCD. The instructor towed the student towards a shallow area where he could stand up. She took the student's equipment and escorted him to the shore. The student appeared to be alright. Their maximum depth was 4m.

September 2015 15/177

Two rebreather divers carried out a dive on a wreck at 31m from a dive boat. One of the divers deployed a DSMB for their ascent and the buddy took hold of the lanyard attached to the reel and they ascended together. At 13m the diver became buoyant and began to rise above the buddy. He immediately dumped air from his drysuit and the rebreather loop which had no effect. The buddy was being pulled up by the lanyard and let go at around 4m. The diver let go of his DSMB and surfaced with his computer registering missed decompression stops. The boat came over to him and because he didn't know what had caused his loss of buoyancy control, the diver asked the skipper to hand him an extra 3 kg weight so he could re-descend to perform in-water decompression. When the extra weight did not help the diver realised that his BCD wing inflator had got caught between him and his 7 lt stage cylinder and was injecting gas into his BCD. He reached for the inflator and dumped the gas but, now over-weighted, he re-descended quickly to 14m. He recovered his DSMB reel and ascended to 9m and followed his computer to carry out a 1 min

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decompression stop at 9m, ascended to 6m where he carried out the remaining decompression as well as extra stops because of his fast ascent. Total time spent underwater for decompression was approximately 14 min. The diver surfaced with a dive time of 71 min to a maximum depth of 31m. When he got back aboard the boat he remained on his rebreather as he was breathing 70% oxygen. Another diver in the boat told him that his unit was saying he had missed 4 min of decompression. The handset had re-set itself for a second dive following the fast ascent and the diver being on the surface for more than 1 min before re-descending. The diver was advised by his buddy to empty the rebreather loop and inject pure oxygen which the diver breathed for 30 min. The buddy, after letting go of the lanyard at 3m, had re-descended to 12m and carried out a slow ascent completing his decompression stops. The divers did not dive again that day and did not display any symptoms of DCI.

September 2015 15/170

A buddy pair were diving from a hardboat and had carried out their first dive to 13m for a total dive duration of 27 min. On their second dive one of the divers deployed his DSMB for the ascent but realised that he had used more air than he thought for the deployment. The diver signalled 'out of air' to his buddy and took her octopus regulator. The divers made an alternate source ascent including a 3 min safety stop at 6m. They surfaced with a dive time of 17 min to a maximum depth of 17m and were recovered by their dive boat and had no ill effects.

September 2015 15/234

A pair of divers conducted a single dive from a boat to a maximum depth of 25m. After a dive time of 44 min the pair were at a depth of 22m and their computers indicated 8 min of required decompression stops. Both divers had 12 lt cylinders, one had 90 bar remaining and the other had 75 bar when they commenced their ascent. The pair conducted a slow ascent and took a total of 6 min to reach their 6m decompression stop. They now had an indicated 19 min of stops. They completed 9 min of stops by which time their cylinder contents had fallen to 40 bar and 10 bar respectively and so they decided to surface missing 10 min of decompression stops. On surfacing the pair were recovered onto the boat and placed on oxygen as a precaution for 15 min and then advised to be aware of any unusual symptoms for 24 hours and not to do anything strenuous. No adverse effects were recorded.

Equipment Incidents

October 2014 15/208

Two divers carried out a boat dive to a reef at 28m. The visibility was low and there was a slight current. One of the divers' primary light failed so he stowed it and deployed his backup. Shortly after a large bang was heard. The divers looked at each other and thinking it may be a burst hose they checked each other's hoses and cylinders. As there was not an obvious equipment problem the divers made the decision to abort the dive thinking it was a diver recall thunder flash. During their ascent a second bang was heard. The divers ignored doing safety stops and surfaced with a dive time of 18 min to a maximum depth of 28m. On the surface it became apparent that there was no emergency. The umbilical cable had been pulled out of the diver's primary light and it was 'fizzing'. It was assumed that the ingress of water had caused the 'explosions'.

January 2015 15/189

Three divers were on their first shake-down shore dive of the year and they planned DSMB deployments at the end of the dive The water temperature was 7 deg C and their brief included filling the DSMBs with short bursts from their alternate source regulators to prevent free flow. The divers descended and carried out a short exploratory dive to a maximum depth of 15m before one of the divers deployed his DSMB. His air was approximately 140 bar at the start of the deployment and the diver used his alternate source regulator in short bursts to inflate the DSMB. The DSMB was released to the surface but the diver's regulator went into free flow. Attempts were made to stop it without success. One of the diver's buddies gave him his alternate source regulator while the other buddy turned the diver's cylinder off and back on which stopped the free flow. The diver switched back to his own primary regulator and his air contents were now reading 80 bar. The divers aborted the dive and ascended to 6m and carried out a 3 min safety stop before surfacing with a dive time of 33 min to a maximum depth of 15m.

January 2015 15/031

Three rebreather divers were carrying out a shore dive but on the descent one of them felt unwell at 5m and bailed out to her open circuit. An 'Up' signal was given and the dive was aborted with a dive time of 5 min and a maximum depth of 10m. On the surface the diver who had bailed out said she had not felt well on the rebreather but felt better when she switched to her bailout and when back on the surface. The diver exited the water and did not dive again that day. During disassembly of her unit it was noticed that the 'spacer' had been omitted in the unit which allowed exhaled gas to bypass the scrubber and carbon dioxide to build up in the loop. The diver was a newly qualified rebreather diver and had assembled her unit without supervision.

January 2015 15/027

Two divers carried out a shore dive to a wreck at 20m. About 14 min into their dive they experienced a regulator free flow and ascended within computer limits.

February 2015 15/026

A trainee had completed a shore dive to 6m for 25 min without incident. After a 60 min surface interval the trainee dived with an instructor to 4m to carry out regulator removal and recovery skills. The trainee discarded the regulator over his shoulder but, with the mouthpiece face up, it went into free flow. The trainee tried to recover the regulator but abandoned the attempt and went onto the instructor's alternate source. The instructor tried to stop the free flow but was unsuccessful and signalled the trainee to ascend. They made a controlled ascent and surfaced with a dive time of 10 min. The regulator continued to free flow on the surface so the instructor turned off the trainee's cylinder, inflated the student's BCD and they returned to shore. The cylinder had been emptied by the free-flow. When asked if he wanted to repeat the dive the trainee agreed and the lesson was completed successfully with a fresh cylinder and without further incident.

March 2015 15/192

A diver was carrying out a distance line exercise on a wreck at 20m. The diver deployed the distance line but at 18m he felt his weightbelt slide down towards his legs. His buddy pushed him to the bottom, sat the diver down and refastened his weightbelt so it was tight. The divers continued with the dive and surfaced with a dive time of 25 min to a maximum depth of 20m.

March 2015 15/193

A buddy pair were diving a wreck at 17m. One diver had just deployed his DSMB when his cylinder slipped from the strap of his BCD and down his back. The diver's buddy, who was diving nitrox 36, replaced the cylinder and refastened the strap securely in place. The divers ascended, carried out a safety stop at 6m and surfaced with a dive time of 17 min to a maximum depth of 17m.

April 2015 15/082

Three divers carried out a boat dive on a wreck at 28m. Prior to the dive it was agreed that the first of the three would deploy his DSMB before they made their ascent. This DSMB was a finger spool system. When the divers prepared to ascend from 20m the first diver had around 50 to 60 bar. What hadn't been made clear before the dive was that the first diver intended to tie the finger spool onto the DSMB underwater. He had not practised this for a while and had never done it wearing thick cold water gloves. As the diver attempted to deploy the DSMB the spool started to freely run out, resulting in line everywhere. A second diver in the group signalled that the deployment should be aborted and the first diver took out his knife to cut the line but the second diver instructed him to leave it as he was conscious of the first diver's air consumption with his effort at depth. The second diver proceeded to deploy his own DSMB but it jammed so he let it go. He signalled to the third diver to deploy his DSMB whilst he and the first diver attempted to control the run of line from the finger spool. As the group ascended, the first diver approached the second diver giving the 'out of air' signal and took his octopus regulator. He later reported that his regulator 'started breathing funny' and when he checked his contents gauge he was very low on air but not empty as it was reading 10 to 15 bar. The divers continued their ascent including a 3 min safety stop and surfaced with a dive time of 25 min.

April 2015 15/212

Two divers carried out a boat dive to 34m. The divers had been briefed to deploy a yellow DSMB up the shotline to simulate a call for gas to practise the deployment of extra gas underwater. Towards the end of their dive on the ascent one of the divers deployed the yellow DSMB, with an integrated CO2 cartridge, from 17m. The DSMB was clipped on using a carabiner. As it started to ascend the 'jaw' of the carabiner snagged the DSMB line and started to pull the diver to the surface so he paid out the line to control the ascent. The divers surfaced with a dive time of 28 min to a maximum depth of 34m. The carabiner, a type without a 'safety gate', had bitten into the DSMB line.

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April 2015 15/213

Two divers carried out a boat dive to a wreck at 30m. On the ascent at 28m they carried out a simulated call for gas underwater. One of the divers deployed his orange DSMB and then prepared his yellow DSMB which had an integrated CO2 cartridge. The diver checked it was clear to deploy and pulled on the cartridge's firing line. The DSMB did not inflate so the diver's buddy deployed his own DSMB. The divers surfaced with a dive time of 31 min to a maximum depth of 30m. When the divers inspected the failed DSMB they found the cartridge had already been used prior to the dive and had not been replaced.

April 2015 15/088

A buddy pair carried out a shore dive to a maximum depth of 35m. At 22m one of the divers had a regulator free-flow. The dive was aborted with a dive time of 20 min. The diver had cramp in the back of his leg. He was given oxygen, which did not resolve the cramp, and was advised not to dive again for at least 24 hours.

April 2015 15/198

Three divers were conducting survey work on a wreck from a dive boat. The group entered the water for a planned 45 min dive. During the dive one of the divers' cylinders came loose from its main clamping system and was only restrained by its safety lanyard. The other divers tried to secure the cylinder but were unable to do so. The dive was aborted with two of the divers ensuring the cylinder was held in place for their buddy on the ascent. The divers surfaced with a dive time of 26 min to a maximum depth of 20m and were recovered to their dive boat.

May 2015 15/216

Following a RHIB's bumpy journey of around forty-five minutes to a wreck dive site, a rebreather diver was completing pre-dive checks. Approximately 30 sec into the 3 min pre-breathe check a 'CO2 alarm' bailout was heard and seen on the head-up display. The diver came off the loop, the unit was shut down and the dive aborted. Subsequent investigation found that the sofnalime was very loosely packed in the canister. The sofnalime had been used for two previous dives for a total duration of 1hr 34 min.

May 2015 15/057

A buddy pair had started their ascent from 9m at the end of a wreck dive to 15m. As they ascended one of the divers had a problem with her buoyancy and held onto her buddy. At about 7m the buddy signalled her to inflate her BCD. The diver let go and descended below the buddy. He dumped his air and followed the diver down and reached her at about 14m. As the buddy approached the diver she was calm and trying to inflate her BCD but then gave the 'out of air' signal. The buddy immediately gave the diver his alternate source and checked her contents gauge. At the start of the ascent the diver's gauge had been reading 70 bar but was now about 20 bar. The buddy attempted to inflate the diver's BCD but nothing happened so he carried out a controlled buoyant lift using his own buoyancy and they ascended at a controlled rate to the surface with a dive time of 37 min. The diver was fine on the surface but a little shocked. The diver's cylinder was refilled and the buddy took it to a 'dunk' tank to check her equipment underwater and noticed that the BCD's direct feed hose connector was leaking near the collar.

June 2015 15/091

A buddy pair had carried out a shore dive to a wreck at 21m and at 15m one of the divers had a regulator free flow. The buddy assisted the diver to the surface. They had no required decompression stops but made a safety stop at 5m and surfaced with a dive time of 22 min. Back on shore the diver was shaking and had 'pins and needles' in his feet. He was given oxygen and monitored for signs of DCI. The diver was advised to drink plenty of water, to check for signs of DCI and remain on the dive site for the next 45 min.

June 2015 15/221

A buddy pair carried out a boat dive on a wreck at 31m. One of the divers was using a BCD with integrated 3 kg weights on each side. The diver carried out the dive but as they were about to ascend from 30m the diver felt buoyant and was struggling not to ascend too quickly. To help control the ascent the buddy took the diver to the shotline and he ascended with no problems and surfaced with a dive time of 38 min to a maximum depth of 31m including decompression stops. As the diver was being recovered by the dive boat and handing in his equipment it became apparent that the BCD's right side integrated weight was missing.

June 2015 15/071

A group of three were diving together from a boat and were at 18m when one of the divers had an equipment failure which rapidly emptied his cylinder. One of his buddies donated her octopus regulator to the diver and the other buddy held onto the sharing pair. All three divers maintained close contact as they ascended slowly together. They surfaced with a dive time of 22 min and were recovered by their dive boat. The diver who had experienced the equipment failure did not dive again that day as it was unclear whether the problem had been caused by his regulator or his cylinder's 'O' ring. It was later discovered that the problem had been caused by the 'O' ring where a small split was evident.

June 2015 15/222

Two divers entered the water from a dive boat to dive a wreck at 35m. As they descended one of the divers had a free flow at 4m from his pony cylinder's regulator. The divers surfaced and replaced the cylinder before they continued with the dive.

July 2015 15/224

A buddy pair were conducting a boat dive to a wreck. The dive plan was for a maximum depth of 35m with a dive time of 30 min with maximum decompression of 10 min and a 3 min safety stop at 6m. The pair descended, carried out their dive and made a gradual ascent. The 5 min of decompression incurred cleared at 12m. For the rest of the ascent, including a 3 min stop at 6m, one of the divers felt his regulator being pulled from his mouth and was aware that his wing BCD was not sitting correctly. The diver became fixated with trying to resolve the problem underwater with his buddy's assistance. The divers surfaced with a dive time of 37 min to a maximum depth of 33m and had completed all decompression and safety stops. As the divers were being recovered to the boat, the diver had difficulty releasing his wing BCD and stage cylinder and required assistance from the crew. Aboard the boat it was found that the knurled nut on the bottom fixing bolt between the single cylinder retainer and the harness was missing. This had caused the BCD wing to swivel round pulling on the diver's primary regulator and prevented easy release at the surface. The nut used on the bolt did not have a nylon insert or any locking method and had worked loose.

July 2015 15/132

A diver, wearing a semi-dry suit, carried out a dive to a wreck at 20m. The diver had a BCD failure when the inflator hose connector failed resulting in the hose hanging off the BCD so the diver had no method of buoyancy control. His buddy,

wearing a drysuit and wing BCD, carried out a controlled buoyant lift on the diver up the shotline and they carried out a 1 min safety stop at 6m. They surfaced with a dive time of 22 min.

August 2015 15/276

A diver signalled to her buddy that something was wrong and she seemed distressed. She immediately began to ascend and her buddy followed her up. On the surface she was upset and was not breathing normally. She said she had swallowed some water and couldn't breathe. An instructor saw the incident on the surface and she went over to help. The casualty was towed to shore and oxygen administered. The whole time the casualty was conscious and coherent. She complained of a tight chest and therefore she was helped out of her wetsuit which was noticeably tight. She was kept on oxygen and monitored.

August 2015 15/111

A diver and his buddy carried out a boat dive to a wreck at 22m. The diver became separated from his buddy when he was distracted by a piece of wreckage. He searched for about a minute and then the diver prepared to ascend. He disconnected his drysuit hose and fitted it to his new DSMB's 'easyfill' adaptor. As the DSMB ascended the drysuit hose free flowed with the result that the diver lost approximately 180 bar of air in about twenty seconds. Completely out of air, but having recovered the piece of wreckage, the diver made a free ascent and surfaced with a dive time of 10 min to a maximum depth of 22m. The diver believed there may have been compatibility issues between the type of hose and the DSMB connector but also noted that the lettering on the DSMB had peeled off after only one dive.

August 2015 15/244

A group of ten divers conducted two uneventful dives on the first day of a three day bank holiday trip diving from a charter vessel. The group had cylinders filled from a local dive centre with a mixture of air and nitrox fills. The next day the group was joined by another pair, from the same club, who had travelled down and brought their own filled cylinders with them. As the group prepared to dive a wreck for the first dive, one of the divers noticed a strange smell from his gas. All divers compared the smell of their fills with that of the recently arrived divers and noted that the gas in the cylinders filled the previous day smelled unusual. They decided not to dive. The boat skipper contacted the dive centre and advised them of the problem. The group returned a total of eighteen cylinders for refilling and, on emptying the contents outside the dive centre, there was a noticeable smell. The dive centre changed the filters on the compressor even though they had recorded only 20 hours usage. By the time the cylinders had been refilled it was decided it was too late to carry out a dive that day. The following day the group decided to conduct shallower dives and keep dive times short as a precaution. No problems were experienced. On returning home the group had the gas analysed and all cylinders checked and internally cleaned. The gas was found to have a high moisture content but no evidence of CO or CO2 was found. The cylinders had no residue in them.

September 2015 15/204

Two divers and an instructor were carrying out a boat dive to a wreck at 18m on a CCR training course. All the divers were using rebreathers with an OCB (open circuit bailout) mouthpiece system. At 50 min into the dive one of the divers saw a small stream of bubbles coming from the mouthpiece on the loop. The diver asked his buddy to assist and the leak was located, but after an attempt to stop the leak, the stream of bubbles increased. The diver came off the loop, closed the mouthpiece and switched to his 7 lt stage bailout alternate supply regulator. All the divers ascended and surfaced with a dive time of 61 min to a maximum depth of 18m. On examining the rebreather the diver found that the O ring on the nut which connected the 7 lt bailout to the OCB had failed. The OCB mouthpiece was stripped out and a normal mouthpiece fitted to the unit and the diver completed the second dive of the day with no further problems.

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Miscellaneous Incidents

May 2015 — 15/253

Two lifeboats launched to locate missing diver(s). False alarm. (RNLI report).

June 2015 — 15/254

Two lifeboats launched to locate missing diver(s). False alarm. (RNLI report).

July 2015 — 15/025

A team of divers, using their RHIB, responded to a 'Mayday' call and played a key role alongside a lifeboat in the rescue of a crew member who had fallen overboard from a yacht. When they arrived they found the crew member laid on the deck with a bad laceration but when one of the divers turned her over she was not breathing and did not have a pulse. The divers set up their oxygen kit and began CPR until the lifeboat arrived and helped to transfer the crew member to the lifeboat. One of the divers continued CPR with one of the lifeboat crew as they returned to port. The casualty was evacuated from the lifeboat by a Coastguard helicopter and taken to hospital but later died. (Media report).

August 2015 — 15/164

A lifeboat reported finding an inflated orange SMB drifting unattached. The buoy was marked with 'Diver below' but no other markings and there was a brass carabiner on the end of the line. A broadcast was made on VHF CH16 and a Coastguard rescue team were tasked to make enquiries with diving companies in the area. A request for information was also posted on Facebook. A diver called the operations room after seeing the post on Facebook to report that it matched the description of his SMB which had been lost in the area the previous day. (Coastguard report).

August 2015 — 15/267

Lifeboat launched to assist diver. False alarm. (RNLI report).

Overseas Incidents

Fatalities

March 2015 15/038

A group of three divers, a dive leader using nitrox 28 and his two buddies, were on holiday and carried out a 28m wreck dive from a liveaboard boat. The group were advised there was a moderate current on the wreck so the dive leader checked with his buddies the first of whom had complained of ear trouble and missed a day's diving prior to the dive. They all agreed to continue the planned dive and used the boat's stern line attached to the wreck to make a slow descent determined by the first buddy's ability to clear his ears. They took 5 min to reach 19m and with the buddy responding to 'OK' signals the divers explored the wreck and reached a maximum depth of 28m. After 12 min the first buddy's cylinder content was down to 80 bar and the group returned to the stern line to start their ascent. At 17m the first buddy started to pull himself rapidly up the line and the dive leader attempted to slow his ascent and calm him down. The buddy removed his regulator which the dive leader replaced and checked the buddy's air which was 70 bar. The buddy removed his regulator again and the dive leader donated his octopus regulator and continued the ascent. The second buddy was standing by to take over the ascent if the dive leader's cylinder became unable to sustain two divers. The buddy continued to try and pull himself up the line with the dive leader attempting to control the rate of ascent. At a depth of 7m the buddy removed the dive leader's mask and regulator and bolted to the surface. The dive leader replaced his mask and regulator and ascended directly to the surface with a dive time of 16 min. On the surface he found the buddy lying on his back and he was recovered from the water by the dive leader with the assistance of the boat crew. Resuscitation was administered by others aboard the boat, including a paramedic and a nurse. The casualty was taken ashore by a rescue boat and transferred by ambulance to hospital but did not recover.

Decompression Illness

November 2014 15/186

A trainee carried out his eighth dive. It was on a wreck, from a dive boat, with another trainee, their instructor and a safety diver. The trainee descended using a shotline and because he had been nervous on previous dives and complained of a sensation of vertigo on descents, his instructor remained in close contact throughout. At the bottom of the shotline in 18m the trainee sat with his group and appeared content whilst feeding fish. After a few minutes the group moved away from the shotline with the two trainees positioned between the instructor and safety diver. The instructor noticed that the trainee appeared pre-occupied with his mask and moved closer. At that moment the trainee suddenly began to ascend. The instructor immediately took hold of him, dumped air and used his weight to slow their ascent. They were close to the shotline which the instructor managed to hold and further control the ascent. According to the computer download it took 2 min from 17m to 10m and the rate of ascent increased from 10m taking just under a minute to surface with a dive time of 14 min to a maximum depth of 18m. The trainee had been breathing rapidly throughout the ascent and straining to reach the surface. On the surface the trainee complained of stomach pain and was immediately recovered to the dive boat and put on oxygen. The remaining divers were recalled and were back aboard within five minutes. Medical assistance was sought and an ambulance despatched to meet the boat when it got back to harbour. The recompression chamber was alerted and one of the divers aboard the boat, a doctor qualified in underwater medicine, observed and treated the trainee throughout the boat journey to the harbour. The trainee was transferred to the chamber by ambulance and diagnosed with DCI. He had a rash on his shoulder and abdomen, abdominal pain and a headache. He received recompression treatment and his symptoms resolved. After overnight observation a further session of recompression treatment was given and the trainee later discharged.

February 2015 15/034

A diver had carried out a boat dive to a wreck at 28m for 35 min with a 3 min stop at 5m. The dive had involved a swim at depth into a strong current to reach the wreck which the diver said was exhausting. After a surface interval of 3 hours 21 min, the diver and his buddy carried out a second dive to 26m for 42 min. This was a gentle drift along a reef and included a 4 min stop at 5m. The diver reported that the approach to the reef was a bit turbulent and an ascent alarm had been quickly corrected by the buddy pair. Upon surfacing with his buddy in a group of six, the divers had to wait between 5 to 10 min while the dive boat picked up other divers. The diver reported to his buddy that he felt a bit nauseous and as the boat approached he was the first to reach the ladder. The diver struggled to remove his right fin with his left hand and was curious as to why. When he tried to remove his left fin with his right hand it was even more difficult but he eventually managed it. Getting up the ladder was difficult as the feeling in the diver's left leg was rapidly disappearing and the boat crew had to assist him aboard using his pillar valve and BCD. By the time the crew had removed his equipment the diver had complete paralysis of his left arm and leg. Within minutes of a neurological assessment it was determined the diver had DCI. He was put on oxygen and remained on this until he reached a hyperbaric chamber 90 min later. Whilst awaiting evacuation to the chamber the diver drank water with the addition of re-hydration sachets. At the chamber the diver was diagnosed with DCI and received recompression treatment which was followed up with further treatment over the next two days.

April 2015 15/049

Divers had dived a wreck, moved onto a reef and begun a slow ascent. At 16m and 32 min into the dive a diver signalled he was on reserve. His buddy misinterpreted his signal and donated his octopus regulator. The diver put it in his mouth without purging it with the result that he inhaled some water. He began coughing and took out the regulator to vomit. He then put it back in his mouth and again did not purge it thus swallowing more water. Another diver arrived, put his octopus regulator in the diver's mouth whilst purging it and continued purging as he carried out a controlled buoyant lift on the diver to the surface. The diver was recovered into the dive boat but it was discovered that the oxygen cylinder was empty so nitrox 36 was administered as the boat returned to shore. Medical assistance was requested but unable to attend so the diver was taken to the nearest medical centre where he was stabilised before being taken to an intensive care unit for observation. The diver was later transferred to a hyperbaric chamber where he received recompression treatment. He was kept under observation for the next two days and then released. The diver recovered well and wanted to continue diving.

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April 2015 15/106

After a week of diving, a diver carried out a morning shore dive to a wreck at 35m for 43 min with a 3 min stop at 6m. After a surface interval of around 3 hours the diver carried out a second dive on the wreck. The diver and his buddy descended to 20m, swam to the wreck and then descended to 35m where 'OK' signals were exchanged. Shortly after this, the diver reported that his vision took on extra colours, similar to wearing 3D glasses with red and green lenses. The diver felt his heart was 'trying to rip itself out of his chest' and he had a very bad headache. He signalled with his torch to get his buddy's attention, indicated he was 'not OK' and to ascend. At this point, the diver believed he had narcosis and knew it would disappear on the ascent but, after a very slow ascent, he still felt things were not right. The divers reached the surface with a dive time of 15 min to a maximum depth of 35m and his buddy asked if he needed a tow back to shore. The diver refused and arrived on the shore where the surface team recovered and de-kitted him, which the diver did not remember happening. The diver was supported to a car and offered oxygen but he refused as his head had started to clear and his heart rate was slowly returning to normal. The diver's fingers started to 'tingle' and he was immediately placed on oxygen and rushed to hospital. He had an ECG and chest x-ray which showed no problems and the diver left the hospital later that day. The diver flew home believing all was well and it had just been a reaction to getting 'narked'. The following day the diver went back to work and felt a little tired; he developed the inability to formulate a proper sentence and was confused. The diver was sent home where, still worried about his inability to form sentences, he called a dive emergency number and a doctor arranged for him to attend a hyperbaric facility. The diver was assessed at the chamber, received recompression treatment and his symptoms disappeared. The diver had a dive medical a month later and was found fit to dive.

May 2015 15/199

A group of three divers, an instructor and two students, completed their first shore dive of the day to 29m for 37 min. At the beginning of the dive they carried out mask clearing skills at 20m and alternate source ascent exercises from 20m to 10m. The group then descended briefly to 29m before heading back towards the shore and completing a safety stop at 6m before exiting the water. Following a surface interval of 2 hours 30 min the group carried out a second shore dive. They descended to 25m and carried out controlled buoyant lift exercises to 9m and 12m, with each student acting as both the recipient and donor. On completion of the skills the group descended to 25m for about 8 min. At around 20 min into the dive one of the students had a slight headache and felt a little nauseous but not bad enough to abort the dive. The group gradually ascended to 14m where they stayed for 3 min. The student's symptoms remained at the same level until the group were conducting their 8 min safety stop at 5m when both the headache and nausea became more acute. The student chose not to terminate the dive at that stage as he knew he would be exiting the water in a few minutes. The group surfaced with a dive time of 38 min to a maximum depth of 25m. The student indicated to the others that he was feeling unwell and wanted to get out of the water rather than continue with some surface towing skills that had been planned. The instructor and other student took him back to shore and helped him to exit and de-kit. The student was dry retching and felt dizzy. There was no loss of consciousness but he could not fully communicate, was very drowsy and confused. The instructor immediately put the student on oxygen and took him to hospital where a hyperbaric chamber was also located. The student was given initial treatment by the ER staff, kept on oxygen, given fluids and blood taken. He was then seen by a diving doctor and given recompression treatment. The student was checked the following day and he felt well and had no symptoms. He was advised not to dive for at least six weeks and then be re-assessed by a diving doctor.

September 2015 15/203

A diver carried out a wreck dive from a RHIB acting as a safety diver for a training group. He surfaced with a dive time of 23 min to a maximum depth of 19m. All the divers were recovered to the RHIB but after a few minutes it was noted that the diver was not fully aware of his surroundings and was concerned about the feeling in his arms and legs. The diver was laid down and put on oxygen. The emergency services were contacted and an ambulance requested to meet the boat which was heading back to shore. A hyperbaric chamber had also been informed. The diver was transferred by ambulance to the chamber and although no longer confused he was given recompression treatment and stayed under observation overnight. The diver had further recompression treatment the next day and was then discharged.

Illness / Injury

October 2014 15/180

A diver using nitrox 33 on an air computer was on a diving expedition and following two boat dives on the first day experienced sinus problems and was told to take a day off. The first dive was to 25m for 35 min and the second to 11m for 40 min. On the day off the diver felt 'pins and needles' in his left arm. On the third day the diver completed one dive to 16m for 41 min but experienced sinus problems again and was advised not to dive for the next two days. On the sixth day the diver carried out a boat dive to 21m for 41 min and had descended slowly due a minor difficulty clearing his ears. When he ascended he again had sinus problems. The diver was taken to a medical centre who gave the diver a nasal spray and he was referred to a doctor. The doctor gave the diver antibiotics after diagnosing sinusitis. The diver saw the doctor two days later and was told it was safe for him to fly home. The diver flew home two days after seeing the doctor but was taken to hospital as he felt dizzy, sick and had 'pins and needles' in his left arm and leg. A hospital doctor said he did not think the problem was serious as the 'pins and needles' were intermittent and the diver passed all the balance and co-ordination tests. The next day the diver had a doctor's appointment, was referred to a hospital consultant and again he passed all the balance and co-ordination tests. The consultant said that as the 'pins and needles' were not as severe as nine days previously and also being intermittent, he did not think it was diving related.

November 2014 15/183

An instructor and his two students were diving from a dive boat onto a wreck. The divers were on air and using nitrox 50 as their decompression gas. On the descent at 6m one of the students indicated they had problems equalizing. The student ascended slightly to try and clear his ears but this did not resolve so the group surfaced and the student was recovered aboard the dive boat. The student was taken to hospital where no problems were found suggesting the student was suffering from a slight cold.

November 2014 15/185

A trainee was carrying out her fourth shore dive. She previously had difficulty clearing her ears but this had been resolved. The trainee conducted a slow and steady descent down a slope with frequent checks by her instructor during which she indicated all was well. At 18m the trainee signalled she had ear

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and forehead pain. A controlled ascent was made during which the trainee indicated the pain was still there but had slightly eased. The trainee surfaced with a dive time of 16 min to a maximum depth of 18m. She exited the water and was examined by a diver, who was also a doctor qualified in underwater medicine. He diagnosed a mild sinus barotrauma and gave the trainee a painkiller. The trainee was later examined by a doctor, given analgesics and told not to dive for twenty-four hours and then see how she felt. 16 hours after surfacing the trainee reported that the pain had reduced to mild discomfort with a 'stuffy' feeling.

December 2014 15/187

A diver using nitrox 32 completed a RHIB dive to a wreck at 25m for 27 min including a 3 min safety stop at 6m. The diver surfaced with a pain in his left arm but climbed back aboard the RHIB without assistance and, after helping the second wave of divers kit up and enter the water, he reported the pain to the dive manager. The diver was put on oxygen after a discussion as to whether the pain was a symptom of DCI as the diver had a history of tendon pain in his left biceps which was not diving related. The diver had suffered the same pain after a dive the day before which he attributed to a recurring tendon strain caused after starting the RHIB's engine but the pain had gone after about a half hour of rest. The diver was returned to shore and taken to hospital still on oxygen. The diver was examined by a doctor who confirmed it was a muscle spasm and not DCI. The diver was discharged from hospital with anti-inflammatory tablets and told not to dive for twenty-four hours.

January 2015 15/188

A diver and his buddy were carrying out a wreck dive from a liveaboard's RHIB. They descended but at 5m one of the divers could not clear his left ear. He tried a couple of times and ascended to 2m to see if it would clear and then re-descended. The diver reached 8m and his ear had still not cleared so the dive was aborted and the pair were recovered by the RHIB and returned to the liveaboard. Their dive time was 4 min to 8m. The diver had mild pain in his ear, was advised to lie down and a small amount of water drained from his ear after 20 min. A couple of drops of 'swim ear' were applied and the diver reported a sharp pain but this lasted for no more than 2-3 min. The diver was checked at regular intervals and then medical advice sought. An ear barotrauma was diagnosed, no further drops were to be given and the diver was told that he could not dive for the rest of the week.

February 2015 15/209

A trainee and her instructor carried out a 20m dive boat dive using nitrox 32. Two days prior to this dive the trainee had aborted a dive due to problems clearing her ears on descent but subsequently completed three further dives without any further issues. As the trainee and instructor ascended the trainee indicated a pain in her ear at 6m. They surfaced with a dive time of 46 min to a maximum depth of 20m. When the divers returned to shore the trainee was seen by a doctor who diagnosed a reversed ear and prescribed antibiotics.

March 2015 15/084

A diver arrived back on shore following a dive to 17m for 30 min and complained of dizziness. This was reported to a senior diver in her group and they took her back to her accommodation. The diver was laid down, monitored and when she said she felt dehydrated she was given sugar fluids. It was decided to put the diver on oxygen as a precaution even though no issues had occurred on the dive and her two dive buddies were not showing any symptoms. The diver said that she normally drank up to 2 lt of fluid a day but had not had a drink prior to the dive. The diver continued to be monitored and drank water and cups of tea. Within 20 min the diver's condition improved and after 90 min her symptoms had cleared. The diver was taken home, checked on later that evening and said she felt fine. The diver was checked by her GP and had routine blood and blood pressure checks. The results were normal and the diver was due to have a follow-up check six weeks later to confirm her fitness to dive.

April 2015 15/096

An instructor had carried out a morning boat dive followed by a lunch break ashore. The boat arrived on the afternoon dive site and the instructor descended to a wreck at 20m to attach the boat's anchor line, which took 3 min, and then made a 2 min ascent. He had a 5 min surface interval during which he conducted buddy checks with his students. They all descended the anchor line, carried out their dive on the wreck, returned to the anchor line and ascended to 6m. One of the students had a rapid ascent alarm on his computer and the instructor made a longer than normal safety stop for 6 min bearing in mind his dive profile. The group surfaced with a dive time of 42 min to 20m and the students exited the water but as the instructor assisted one of them removing a fin, it was dropped and sank. With all his students back on the boat and the lost fin visible from the surface, the instructor descended back to 20m and retrieved it. His dive time was 3 min. Three to four hours later the instructor felt dizzy and assumed that he needed rehydration and food so he ate a snack and drank 1 lt of water and then went to find some food. He ate again but continued to get dizzier, began to feel disorientated and confused. He had also started to slur his words and he sought medical advice. It was recommended that he go to hospital as he had previously suffered DCI some three years earlier. The instructor was taken to a local hospital, admitted to A&E and his symptoms were mostly relieved after forty minutes on oxygen although he was still slightly dizzy. The duty doctor contacted a hyperbaric chamber and the instructor was examined by a diving doctor who deemed recompression unnecessary but recommended the instructor have a test for a PFO at a later date. The doctor also advised against flying in an unpressurised aircraft or diving again within the next forty-eight hours. The instructor's slight dizziness resolved over the next twenty-four hours and he had no further signs or symptoms.

May 2015 15/172

A diver was abroad on holiday when she carried out her first sea dive on nitrox 32 from the shore. This was a shake-down dive to 14m for 36 min with a 3 min stop at 6m. The diver found it exhausting as she had a problem with her mask and was clearing it for most of the dive. The second dive of the day, again on nitrox 32, was in the afternoon and the diver's buddy had suggested they carry out this dive for around 25 min to ensure the diver's mask problems were resolved. The diver enjoyed the dive as she felt much more relaxed but after 25 min found she was feeling tired and signalled to ascend. The pair surfaced with a dive time of 28 min to a maximum depth of 12m including a safety stop for 3 min at 6m. On the surface the diver felt nauseous and extremely fatigued. She managed to climb onto the first step of a platform by a jetty but felt worse and was sick. The diver removed her fins but needed her buddy's help to de-kit and get onto the platform. After around 6 min the diver made her way up the steps to the jetty and rested for 15 to 20 min drinking water. The diver was shaking all over, but was not cold, and managed to walk back with assistance to the dive centre. Her blood pressure was taken and it was low. The diver was given more water and rehydration salts and advised to rest for 24 hours and keep up the intake of water and the rehydration powders. She slept for around 3 hours and woke still feeling shaky and tired. After two night's sleep and resting through the day the diver felt back to normal and over the rest of the holiday had five more dives with no further problems.

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Boating and Surface

November 2014 15/015

An instructor was in a dive group with two students and another instructor with a trainee instructor. They conducted two boat dives on local wrecks. They arrived at the first dive site at the same time as another dive boat. As the wreck was well dispersed the two boats deployed their anchors at least 100m apart, at the same time. The divers on the instructor's boat completed their diving before the divers on other boat and moved to the second dive site; a wreck at 24m. All the divers were descending as the second dive boat arrived. On the seabed, at 24m, the instructor was conducting skills with his students when an anchor landed approximately 3m from their position. When the instructor surfaced he swam to the second dive boat to complain to the dive manager, who apologised. The cox'n of the instructor's boat reported that the cox'n of the second boat did not attempt to speak with him when it arrived and had deployed their anchor after one pass over the site.

Ascents

October 2014 15/007

An instructor and two students carried out a training dive on a wreck. With a maximum depth of 16m and around 14 min into the dive one of the students lost buoyancy control at 10m while trying to locate his dump valve and made an uncontrolled ascent. The student was recovered to the dive boat and given oxygen and water. Following a neurological examination aboard the boat a medic was contacted who advised that no further oxygen was necessary but the student should be monitored for the next six hours. The student was allowed to drink and eat as normal and after the six hours had elapsed, a further neurological examination found no signs or symptoms.

October 2014 15/023

Three divers dived a wreck at 36m from a hardboat. Up to 20 min of pre-planned decompression stops were accumulated. The divers deployed a DSMB and having conducted deep stops they ascended to 10m. With 10 min of decompression still left, one of the divers felt buoyant and, unable to dump air quickly enough from her drysuit, ascended to the surface. On the surface the diver felt physically fine, if not a little shaken, but having only just made contact with the surface, still holding the DSMB line and aware it was a long journey back to shore the diver re-descended to join the other two to complete the decompression stops. The diver stayed on the stop for an extra 5 min as well as carrying out a 3 min safety stop. Back aboard the hardboat the diver was administered oxygen for 30 min with intermittent checks from first aiders and remained without any side-effects.

Technique

September 2015 15/178

An instructor and two students carried out a second training dive from a jetty as part of a week's diving course. Their first dive had been to 9m for 37 min. The group entered the water and swam out with an SMB and descended to 6m using the SMB as a datum line. Both students carried out alternate source ascent exercises and returned to 6m to start controlled buoyant lift exercises. The first ascent was controlled but on the surface one of the students signalled he had a problem and pointed to his leg. The student had lost a fin and was assisted to exit the water while the instructor and remaining student descended the SMB datum and searched for the fin but without success and surfaced with a dive time of 32 min to a maximum depth of 7m.

Equipment

February 2015 15/210

Two divers using nitrox 32 carried out a boat dive. Around 12 min into the dive and at 20m one of the divers noticed his back-up computer had failed. He and his buddy carried out a computer fail plan by aborting the dive and undertaking a safety stop of 3 min at 6m. The divers surfaced with a dive time of 19 min to a maximum depth of 25m. The computer's battery was replaced and it functioned correctly.

February 2015 15/033

A diver was on holiday diving from a hardboat. Before the second dive of the day to a wreck at 21m and using nitrox 32 in a single cylinder, the diver noticed there was a 'bulge' in her octopus regulator hose. Nobody on the boat had a spare and although the diver had another regulator set, the hoses were incompatible with her first stage and BCD inflator. The diver was keen to go diving and the divemaster aboard assured her it would be fine. The diver knew it was risky and admitted it was careless but decided to carry out the dive anyway. Around 18 min into the dive and inside the engine room at 16m, the low pressure hose exploded. The diver went straight to her buddy who quickly gave her alternate source. They exited the wreck and began a controlled ascent during which they located the shotline and with 100 bar in the buddy's cylinder, decided to carry out a 3 min safety stop. Two days later a bulge appeared on the buddy's regulator hose and this was changed immediately.

August 2015 15/202

A buddy pair were boat diving and descended a shotline. At 4m they carried out an equipment check and one of the divers noticed a large bubble on his buddy's high pressure hose near the connection to the first stage. The diver signalled to abort the dive and they ascended the shotline and were recovered to the boat. They had a dive time of 2 min to a maximum depth of 4m. Nothing could be done on the boat but back on shore the buddy replaced the hose and checked the rest of his regulator.

September 2015 15/240

A diver was on a liveaboard trip and had completed seven dives during the first two days with one dive to a maximum of 37m and the remaining six ranging from 14 - 29 m. Prior to the trip the diver had requested air fills for all dives during his holiday and had assumed this is what he had been using. As he prepared to dive the morning of the third day his son was checking his own nitrox mix and decided to use his father's cylinder to calibrate the sensor. In doing this he identified that his father's cylinder contained 32% nitrox and the diver had been unaware that he had not been provided with the air fills he had requested. The dive operator was notified and took immediate action to empty and refill a number of cylinders that were supposed to be air. The following day the diver completed a dive to a maximum depth of 43m.

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September 2015 15/179

Two divers were on a diving trip and carried out a reef dive. Following a buddy check, with all equipment working correctly, the pair entered the water from a dive boat. They descended to 30m and then began to ascend a slope. One of the divers had a problem when he tried to inflate his BCD and gave the 'something wrong' signal to his buddy. The BCD's inflator was not providing buoyancy when operated. The buddy checked the diver's BCD and saw air coming from the fitting that connected the corrugated hose to the BCD's bladder. The buddy tightened the fitting and the buddy was able to inflate his BCD. The pair continued the dive and surfaced with no further problems with a dive time of 25 min to a maximum depth of 30m.

Miscellaneous

February 2015 15/211

On a planned depth progression dive to a 45m reef, a diver was asked to confirm if he was dived up for the planned depth. The diver confirmed he was and that he and his buddy, both using nitrox 23, planned a no stop dive. The divers completed their dive and surfaced with a dive time of 60 min to a maximum depth of 45m. Later that day the diver realised that his training for depth progression was in 10m increments and he had inadvertently exceeded this by 5m on the dive. He reported this to the dive manager who believed it was a genuine mistake.

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INCIDENT REPORTS

If you would like to add to, correct or place a different interpretation upon any of the incidents in this report please put your comments in writing and send them to the following address:

The Incidents Advisor,
The British Sub-Aqua Club,
Telford's Quay,
South Pier Road,
Ellesmere Port,
Cheshire,
CH65 4FL.

For new incidents please complete a BSAC incident report form and send it to BSAC HQ at the address shown above.

All personal details are treated as confidential.

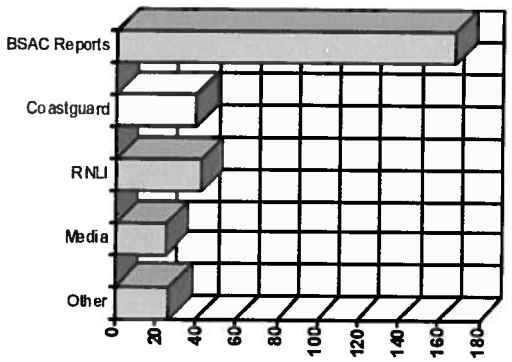
Incident Report Forms can be obtained free of charge from the BSAC Internet website
http://www.bsac.com/incidentreporting
or by phoning BSAC HQ on ***0151 350 6200***

Numerical & Statistical Analyses

Statistical Summary of Incidents

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Incidents Reported	439	465	453	409	498	499	437	401	416	453	412	405	377	335	277	274
Incidents Analysed	417	458	432	392	445	474	418	377	381	409	393	392	346	311	265	252
UK Incidents	384	433	414	366	423	441	379	349	359	381	364	375	314	263	216	226
Overseas Incidents	33	25	18	26	22	33	39	28	22	28	29	17	32	48	49	26
Unknown Locations	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UK Incident - BSAC Members	113	122	149	162	154	160	148	120	129	120	116	193	133	104	101	131
UK Incident - Non-BSAC Members	52	94	55	74	72	65	50	61	65	29	30	94	40	38	30	24
UK Incident - Membership Unknown	219	217	211	130	197	216	181	168	165	232	218	88	141	121	85	71

UK Incident Report Source Analysis



Total Reports: 300
Total Incidents: 226

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History of UK Diving Fatalities

		Number of Fatalities	
Year	Membership	BSAC	Non-BSAC
1965	6,813	3	-
1966	**7,979**	**1**	**4**
1967	8,350	1	6
1968	**9,241**	**2**	**1**
1969	11,299	2	8
1970	**13,721**	**4**	**4**
1971	14,898	0	4
1972	**17,041**	**10**	**31**
1973	19,332	9	20
1974	**22,150**	**3**	**11**
1975	23,204	2	-
1976	**25,310**	**4**	**-**
1977	25,342	3	-
1978	**27,510**	**8**	**4**
1979	30,579	5	8
1980	**24,900**	**6**	**7**
1981	27,834	5	7
1982	**29,590**	**6**	**3**
1983	32,177	7	2
1984	**32,950**	**8**	**5**
1985	34,861	8	6
1986	**34,210**	**6**	**9**
1987	34,500	6	2
1988	**32,960**	**10**	**6**
1989	34,422	4	8
1990	**36,434**	**3**	**6**
1991	43,475	8	9
1992	**45,626**	**9**	**8**
1993	50,722	3	6
1994	**50,505**	**6**	**6**
1995	52,364	9	9
1996	**48,920**	**7**	**9**
1997	48,412	4	12
1998	**46,712**	**6**	**16**
1999	46,682	8	8 *
2000	**41,692**	**6**	**11**
2001	41,272	9	13
2002	**39,960**	**4**	**10**
2003	38,340	5	6
2004	**37,153**	**6**	**19**
2005	37,185	5	12
2006	**35,422**	**4**	**12**
2007	34,857	7	5
2008	**34,325**	**6**	**4**
2009	32,790	7	7
2010	**32,229**	**8**	**9**
2011	30,909	4	7
2012	**29,632**	**10**	**7**
2013	28,728	5	10**
2014	**28,375**	**6**	**10**
2015	27,803	3	6

* 1999 Figure corrected from 9 to 8 due to a double count discovered in 2010
** 2013 Figure corrected from 9 to 10 due to reporting of a snorkel fatality after the publication of 2013 report

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LIST OF ABBREVIATIONS USED IN THIS AND PREVIOUS INCIDENT REPORTS

AS	Alternative source (gas or air)
AAS	Alternative air (gas) source
A&E	Accident and emergency department at hospital
AED	Automated external defibrillator
ARCC(K)	Aeronautical rescue coordination centre (Kinloss)
ARI	Aberdeen Royal Infirmary (Scotland, UK)
AV	Artificial ventilation
AWLB	All weather lifeboat
BCD	Buoyancy compensation device (e.g. stab jacket)
BOV	Bailout valve
CAGE	Cerebral arterial gas embolism
CG	Coastguard
CCR	Closed circuit rebreather
CNS	Central nervous system
CPR	Cardiopulmonary resuscitation
CRT	Coastguard rescue team
DCI	Decompression illness
DDMO	Duty diving medical officer
DDRC	Diving Diseases Research Centre (Plymouth, UK)
DSC	Digital selective calling (emergency radio signal)
DSMB	Delayed surface marker buoy
DPV	Diver propulsion vehicle
ECG	Electrocardiogram
ENT	Ear, nose and throat
EPIRB	Emergency position indicating radio beacon
FAWGI	False alarm with good intent
FRS	Fire and rescue service
GP	General Practitioner (doctor)
GPS	Global positioning system
Helo	Helicopter
HLS	Helicopter landing site
HMCG	Her Majesty's Coastguard
HUD	Head up display
ILB	Inshore lifeboat
INM	Institute of Naval Medicine
IV	Intravenous
LB	Lifeboat
MCA	Maritime & Coastguard Agency
m	Metre
min	Minute(s)
MOD	Maximum operating depth
MOP	Member of the public
MRCC	Maritime rescue coordination centre
MRSC	Maritime rescue sub centre
MV	Motor vessel
NCI	National Coastwatch Institute
PFO	Patent foramen ovale
PLB	Personal locator beacon
POB	Persons on board
QAH	Queen Alexandra Hospital (Portsmouth, UK)
QAB	Queen Anne Battery (Plymouth, UK)
RAF	Royal Air Force
RHIB	Rigid hull inflatable boat
RMB	Royal Marines base
RN	Royal Navy
RNLI	Royal National Lifeboat Institution
ROV	Remotely operated vehicle
SAR	Search and rescue
SARIS/SARSYS	Search and rescue information system
SMB	Surface marker buoy
SRR	Search and rescue region
SRU	Search and rescue unit
UK SDMC	UK Sports Diving Medical Committee
UTC	Coordinated universal time
VLB	Volunteer life brigade
999	UK emergency phone number

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