

Murrayfield Hyperbaric Treatment & Training Services Limited

Quality Report

Murrayfield Hyperbaric Unit Murrayfield Hospital, Wirral. Holmwood Drive, Heswall, Wirral. Tel: 0151 648 8000 Website:www.hyperbaric-medicine.co.uk

Date of inspection visit: 24 and 25 November 2015 Date of publication: 25/05/2016

This report describes our judgement of the quality of care at this location. It is based on a combination of what we found when we inspected and a review of all information available to CQC including information given to us from patients, the public and other organisations

Letter from the Chief Inspector of Hospitals

Murrayfield Hyperbaric Treatment & Training Services Limited has provided the service at Murrayfield Hospital Hyperbaric Medicine Unit for 12 years. We inspected the service on 24 and 25 November 2015. The hyperbaric unit was in the grounds of an independent hospital in Heswall, Wirral. The unit provided hyperbaric (high-pressure) oxygen therapy for a range of conditions. The service was available to NHS and private patients of all ages.

We carried out this inspection as part of our pilot phase for independent healthcare services so we have not rated the service.

This inspection was undertaken in line with the SS framework and we assessed the service against criteria to judge whether treatment and care was safe, effective, caring, responsive and well-led.

Are services safe?

Service used good systems and processes to protect patients from avoidable harm and abuse. It had high standards of cleanliness and checked and maintained equipment appropriately. Staff were aware of safeguarding procedures and managers checked that they had completed their training as part of the appraisal process. Staff paid careful attention to all aspects of safety. They kept comprehensive, well laid out and concise medical records. Staff assessed and took into account risks to individual patients. The unit was fully staffed and had access to additional specialist medical support if required.

Are services effective?

Staff worked strongly as a team and with other agencies. Emergency treatment was available 24 hours a day, every day of the year. Due to the specialised nature of the service, there was no national benchmarking, but we saw that patients were fully assessed and that treatment was based on best practice. The service followed up on patients' progress after completion of their treatment. Staff were experienced, well trained and well supported. Patients told us that they were pleased with their health outcomes.

Are services caring?

We found the staff at the hyperbaric unit to be caring. Staff were ready to discuss patients' treatments with them and involve them and (where appropriate) their families in decisions about care and treatment. Care and treatment was provided in a friendly, kind and respectful manner. Patients told us all staff were approachable and friendly. Staff provided empathetic support to families (where appropriate) as well as to the patients.

Are services responsive?

Treatment schedules for non-emergency patients took their individual circumstances into account. Rapid access to treatment was provided for emergency patients, when the unit could be opened within about an hour at any time of the day or night. Patients told us that they received prompt appointments and that there was no delay in their treatment when they arrived at the unit. The service was patient-centred and encouraged feedback. The service had a complaints policy but no complaints had been received.

Are services well led?

The medical director and the registered facility manager provided strong clinical and professional leadership. Staff shared a strong commitment to providing the best possible service to patients. There was an open and honest culture. Feedback from patients and staff was encouraged. Investment was made in equipment and premises to further improve the service and to enhance service participated in both national and international research

Our key findings were:

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- The service was well equipped and well maintained, with careful attention to aspects of safety.
- Staff were caring and sensitive towards patients and were able to provide emotional support where needed.
- The service had sufficient chamber staff who were well qualified.
- Staff were responsive to patients' individual needs.
- The medical director and registered manager (who was also the facility director) provided strong leadership and team working was effective.

There were also areas of practice where the provider should make improvements.

The provider should:

- ensure that the emergency resuscitation equipment held outside the chamber is checked at least weekly
- ensure that medical cover is risk assessed and reviewed at regular intervals
- ensure that medicines are checked regularly and expiry dates are monitored.

Professor Sir Mike Richards Chief Inspector of Hospitals

Overall summary

There was a small team of staff at the centre who worked well together. We found the medical director, the facility manager and the hyperbaric nurse to be knowledgeable and skilled. They had a positive ethos towards good quality care. Both the medical director and facility manager were visible and approachable.

We found emergency access to the service was good. Staff could be called in and the unit opened within an hour. The average wait from referral to treatment was six weeks. We found this to be comparable with the average wait for treatment in other such units. Staff at the hyperbaric unit were compassionate and caring. They were aware of the experience for patients and were very supportive to people who were anxious and did not just take their hyperbaric treatment in isolation. The timing of the morning and afternoon sessions meant that patients did not have to travel very early or return home late. There was flexibility for elective patients to attend sessions to fit in around their own routine. There were clearly defined vision and values for Murrayfield Hyperbaric Treatment & Training Services Limited. Staff understood their role in achieving the vision for the service and there was a pathway to monitor progress towards delivering goals. Staff told us they received an annual appraisal, this was confirmed by the records we reviewed. Records also confirmed that there were regular, staff meetings. Staff reported that they could be involved in developing the service through these meetings.

There was a strong focus on patient safety. Appraisal for Accreditation and Membership by the British Hyperbaric Association (BHA) was undertaken in February 2015. Maintenance records indicated staff carried out safety checks on a daily, weekly and monthly basis, for example, the oxygen and carbon dioxide levels within the chamber, was checked daily. However, we found the resuscitation equipment inside the chamber such as the medicine and airway bag were only checked on a weekly basis.

Our judgements about each of the main services

Service

Rating

Murrayfield Hyperbaric Treatment & Training Services Limited was established in 1993; the centre has been providing a service at the current location for 12 years and is privately owned and managed by the technical and research director.

Summary of each main service

The hyperbaric medicine unit is located within the ground of the grounds of an independent private hospital. The unit provides hyperbaric (high-pressure) oxygen therapy for a range of conditions and is available to NHS and private patients of all ages and to Police, Fire Service and Military personnel. The service is available to adult patients 24 hours per day 365 days per year. The chamber is a category 1 unit, as defined by the Cox report categories (The Faculty of Occupational Medicine, Cox report 1994) which meant facilities should be capable of receiving patients in any diagnostic category, who may need advanced life support either immediately or during hyperbaric oxygen treatment. The service provides two multi-place chambers (space for more than one person at a time); there was space for seven people in each chamber. Staff could lock in and lock out of the chamber. It was equipped for staff to look after critically ill patients if required.

Hyperbaric oxygen treatment involves breathing pure oxygen at higher than atmospheric pressures within an enclosed chamber. The atmospheric pressure varies, but can be the equivalent to being up to 40 feet under water. Hyperbaric therapy is and can be used to treat a variety of medical conditions. This includes decompression illness sustained after diving; the treatment of radiation tissue injury; treatment of necrotising wounds; carbon monoxide poisoning and gas embolism (air bubbles in the blood vessels). Treatment was available 24 hours a day all year round for patients requiring emergency treatment. Elective patients received treatment every weekday. Length of treatment depends on the specific condition suffered by the patient.

Consultants, the coast guard, emergency departments, other emergency services and GPs referred patients to the service. Most none emergency

Hyperbaric Therapy Services

patients were treated through a contract with NHS England before elective treatment commenced. Emergency patients could be referred from anywhere within England dependent on availability, clinical need and transport requirements. The unit was commissioned to treat adults for emergency and elective work. There were no special reviews or investigations of the hospital by the CQC at any time previously. There had been no previous CQC inspections. The registered manager had worked at the service for 22 years.

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Location name here

Services we looked at

<Delete services if not inspected> Urgent and emergency services; Medical care; Surgery; Critical care; Maternity; Services for children and young people; End of life care; Outpatients and diagnostic imaging; Termination of pregnancy; Hyperbaric Therapy Services; Dialysis Services; Diagnostic Imaging and Endoscopy Services; Refractive eye surgery; Long term conditions; Acute wards for adults of working age and psychiatric intensive care units; Forensic inpatient/secure wards; Long stay/rehabilitation mental health wards for working-age adults; Child and adolescent mental health wards; Wards for older people with mental health problems; Wards for people with learning disabilities or autism; Community-based mental health services for adults of working age; Mental health crisis services and health-based places of safety; Specialist eating disorders services; Perinatal services; Specialist community mental health services for children and young people; Community-based mental health services for older people; Community mental health services for people with learning disabilities or autism; Services for people with acquired brain injury; Services for people with psychosexual disorders; Outpatient services (for people of all ages); Substance misuse services; Substance misuse/ detoxification; ECT clinics; Psychosurgery services; Tier 3 personality disorder services; Liaison psychiatry services; Community health services for adults; Community health services for children, young people and families; Community health inpatient services; Community end of life care; Community dental services; Community health (sexual health services); Urgent care services;

Background to Murrayfield Hyperbaric Treatment & Training Services Limited

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enclosed chamber. The atmospheric pressure varies, but can be the equivalent to being up to 40 feet under water. Hyperbaric therapy is and can be used to treat a variety of medical conditions. This includes decompression illness sustained after diving; the treatment of radiation tissue injury; treatment of necrotising wounds; carbon monoxide poisoning and gas embolism (air bubbles in the blood vessels). Treatment was available 24 hours a day all year round for patients requiring emergency treatment. Elective patients received treatment every weekday. Length of treatment depends on the specific condition suffered by the patient.

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Our inspection team

Our inspection team was led by two inspection managers, an inspector and a consultant with specialist knowledge of hyperbaric medicine.

We carried out the inspection on 24 and 25 November 2015. We spoke with five patients and six members of staff, including the facility director, medical director and chamber staff. We observed how patients were being cared for and reviewed patients' clinical records. Prior to the announced inspection, we reviewed information we had received from the service.

Summary of this inspection

How we carried out this inspection

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Information about Murrayfield Hyperbaric Treatment & Training Services Limited

In 2014, the service treated 57 patients, made up of 17 patients treated for decompression injury after diving, four other non-diving emergencies, and 36 non-emergency patients. The number of treatments carried out in the 12 months prior to our inspection was 965. All patients treated at the unit over the last 12 months were over 18.

The most common non-emergency treatments at the unit were for radiation tissue injuries, necrotising soft tissue infections, failing skin grafts, and other problem wounds. The overall management structure of the unit consisted of the facility director and the medical director (who was an intensive care consultant). Nine other staff were employed full time and were dual trained in hyperbaric medicine as chamber operators (with technical skills to operate the chamber) and as chamber attendants (where they would stay in the chamber with patients for the duration of the treatment).

What people who use the service say

Patients we spoke with told us staff were compassionate and looked after all their needs. Comments we received from patients included; "All the staff are lovely." Another patient commented; "The staff are always really calm, polite and caring, nothing is too much trouble."

Safe	
Effective	
Caring	
Responsive	
Well-led	

Information about the service

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Summary of findings

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Are hyperbaric therapy services safe?

There was an 'on-call' rota, which confirmed the unit was available to emergency patients out of hours. There was a potential service risk in relation to the medical support, out of hours, as it was delivered primarily by one doctor (the medical director) with the assistance of one other doctor on the rare occasion the medical director was not available. The British Hyperbaric Association (BHA) guidelines indicate a doctor should be "in the vicinity of the chamber"; the medical director confirmed that a doctor was never more than 20-30 minutes away.

There had not been any serious incidents related to hyperbaric treatment in 12 months prior to inspection. There were good systems and processes in place to protect people from avoidable harm and abuse.

Environmental audits were completed on a daily, weekly and monthly basis.

We saw that mandatory training was up to date for all of the 11 staff. Staff records indicated all staff had completed advanced life support within the past two years. This is well within the four yearly requirements according to the Resuscitation Council.

Incidents

- There were no serious incidents related to hyperbaric treatment in the 12 months prior to our inspection. There were systems in place to report and record incidents when they occurred.
- There was a book in use to record all minor incidents and accidents such as trips and falls. This was labelled as the 'accident book' but served a dual purpose as the incident log. However, clinical incidents for example incidents of oxygen toxicity were dealt with individually as they occurred. These were fully recorded in patient case notes and reviewed and discussed by the clinical lead and the rest of the team, as part of scheduled weekly clinical meetings.
- Staff described an incident in July 2015 when a patient suffered oxygen toxicity during treatment. This was one of the possible consequences of hyperbaric treatment and was reported and managed

appropriately. Records we reviewed confirmed that the incident had been logged in the patient's records and brought to the attention of the medical director and the facility manager.

- We found this to be in line with the unit's incident reporting policy, which indicated the facility manager and medical director were responsible for reviewing any incidents.
- We saw records which evidenced investigations had taken place after something went wrong, for example when a patient had become claustrophobic whilst in the chamber. Any lessons learned were communicated to staff both verbally and in minuted team meetings. We reviewed records of these meetings and saw that the detail of the incident had been discussed and actions agreed. However we found that although information was effectively disseminated amongst the team, there was no specific clinical incident log in place. Following our inspection we received further documentation from the provider which confirmed that a formal electronic incident log had been developed.

Duty of Candour

- The incident reporting policy did not include any specific reference to duty of candour. However the policy has clearly defined obligations and process which comply with the duty of candour obligations. We noted that the policy was up to date and had been reviewed regularly to ensure full compliance with duty of candour obligations. For example we noted that the policy required staff to inform the patient and or their representative if something had gone wrong, This provided assurance that the units reporting policy addressed duty of candour requirements.
- Staff also told us they were aware of the need to be open and honest with patients if something went wrong.
- We assessed the policy and confirmed it met the duty of candour requirements.

Cleanliness, infection control and hygiene.

 Records we reviewed, such as clinical meeting minutes, individual patient files and team minute meetings confirmed that there had been no cases of a h

- The room and chamber were visibly clean.
- We looked at the weekly, fortnightly, monthly and quarterly cleaning schedules of the environment and equipment and saw these records were up to date.Staff cleaned chairs in the chamber at the end of each day. Equipment was cleaned on a fortnightly, monthly or quarterly basis dependent on its use.
- Masks used by patients were disposed of after each session in the chamber. Tubing used during treatment was disposed of as the unit used single use tubing which was disposed of after each session.

Environment and equipment

- The chamber was well lit; there was an emergency generator back up. There were small porthole windows to reduce the feeling of claustrophobia.
- There was two-way communications into and from the chamber via speakers which were used throughout treatment. The chamber operator monitored patients via windows and close circuit television (CCTV).
- We saw valid public and employers liability insurance certificates, which were bespoke for the unit.Fire prevention certificates which included the overall fire plan of the hospital, and were issued in 2015 following assessment.
- The maintenance records indicated staff carried out checks on a daily basis, for example, the oxygen and carbon dioxide levels within the chamber.
- The resuscitation equipment inside the chamber such as the 'medic' bag and airway bag were checked on a daily basis. The Resuscitation Council (UK) recommends the frequency of equipment checks will depend upon local circumstances but should be at least weekly.
- Other emergency equipment for intravenous infusions and emergency chest drains were kept in the unit, in a side area outside the main chamber room. However we noted that tubing used to intubate patients in an emergency, was left open on a trolley in the emergency room close to the chamber. We raised the potential risk this may pose to patients with the provider, who addressed the issue immediately.

- Staff told us emergency equipment inside the chamber, such as the ventilator and defibrillator, was suitable for use under high air pressure.
- We were shown up to date service schedules for the mechanical aspects of the chamber. A third party company was responsible for the maintenance of the chamber;

Medicines

- We saw in patient records that the "Marx treatment protocol" was documented for elective patients. (This is a widely accepted and documented indication for hyperbaric oxygen in chronic radiation injury, developed by Marx, 1985)
- We observed oxygen treatment recorded in individual case notes. An appraisal by the BHA in February 2015 found the ambient oxygen levels in the chamber were at the appropriate level.
- The provider had a code of practice for the management of medicines in the unit. This laid out clear guidance and responsibilities.

Records

- Patient records were kept in the hyperbaric unit inside a locked cabinet. This meant that they were easily accessible for staff.
- We saw the elective patient pathway contained a description of Caldicott and information governance information which helped inform staff of the requirements. We were told the facility director was the Caldicott guardian for the unit. (A Caldicott guardian is a senior person responsible for protecting the confidentiality of patient and information and enabling appropriate information-sharing).
- We were shown electronic patient records which were securely accessed by unique staff log in.
- Staff collated patient data and sent this electronically to NHS England. This data included a record of the number of treatment sessions and utilisation of the chamber. This was used to record use of the chamber and therapeutic treatment of patients.
- We looked at a sample of ten paper patient records. These were legible and concise. There was a pre-treatment assessment completed by the

consultant. A basic nursing assessment was completed during the pre-assessment visit and an outpatient care plan recorded for each patient at each treatment session.

• Staff maintained a comprehensive treatment log for each patient; this included the planned number of sessions, the oxygen level they had received, the length of treatment and which protocol had been used. We found evidence of on-going assessment and patient reassurance in records.

Safeguarding

- We noted that there was a non-service specific policy for the protection of vulnerable adults. The policy in place in the unit was a generic one. We raised this with the facility manager during our inspection who assured us this would be addressed immediately; we received a copy of an updated service specific safeguarding policy 24 hours after our inspection visit.
- Information received from the provider prior to inspection stated that were 100% of staff were trained in adult safeguarding level 2. This was confirmed by records we reviewed and discussions with staff.
- The service was not commissioned to treat children and confirmed it had not done so.

Mandatory training

- We reviewed records which confirmed that mandatory training was up to date all staff. For example, Fire training, moving and handling training and governance training.
- Staff records indicated all staff had completed advanced life support (ALS) and were instructors in ALS.

Assessing and responding to patient risk

• The consultant reviewed elective patients in a scheduled pre-assessment clinic. This included recording medical and basic social history. The consultant told patients of the risks associated with treatment. Pre-admission testing took place as indicated by National Institute for Health and Care Excellence (NICE) guidance. However, this did not currently include routine MRSA screening.

- Staff informed patients that eye problems returned to a pre-treatment state usually after three months. The BHA audit of 2015 noted the elective patient pathway described how to monitor eyesight. There was a recommendation to add further information regarding the time, 'trigger' points and supervision of fitness to drive to the eyesight monitoring protocol. Records we reviewed confirmed the provider advised patients on the potential risks and triggers, on an individual basis.
- Staff told us patients were able to take a five-minute break inside the chamber, remove their hoods and have a drink during the two-hour session. This helped to minimise the risk of oxygen toxicity.
- If a patient should become unexpectedly unwell during treatment, chamber staff were qualified to deal with emergency situations until decompression could take place. We reviewed staff records which confirmed that staff within the chamber were qualified intensive care nurses and paramedics. We noted that chamber staff had up to date Advanced Life Saving [ALS] qualifications. This provided assurance that chamber staff were qualified to manage and respond to unexpected incidents within the chamber.
- The BHA guidelines indicate a doctor should be "in the vicinity of the chamber". We spoke with the medical director about this. They told us a doctor was never more than 30 minutes away. They said patients reach a 'depth' of nine metres after 15- 30 minutes and a doctor would not be present unless there was an unexpected emergency. The resident medical officer of a nearby hospital would be called in this situation. The medical director confirmed that 15-30 minutes was accepted as 'in the vicinity' for the purpose of the guidelines.
- Staff told us about 17 patients a year received emergency treatment. This was confirmed by information we received from the provider prior to inspection.
- We observed BHA guidelines being followed. For example, according to guidelines, patients may not start treatment without appropriate consultant assessment; during our inspection we spoke with five patients who told us that they had undergone a comprehensive assessment prior to starting their treatment.

Nursing and other staffing

- There were 11 staff including the facility director employed on a full time basis. They came from a variety of backgrounds including critical care nursing, paramedics and anaesthetic practitioners. Staff were all trained to both operate the chamber and attend patients during treatment.
- There had been a low rate of sickness for the 12 months preceding our visit
- Three staff were planned for each session. Staff told us this was to mitigate against emergency situations.

Medical staffing

- There was one consultant who also was in the role of medical director at the unit. They were not employed full time by the service.
- The unit's medical director was a trained intensive care consultant and worked at a hospital within the region. We asked about the possibility of the consultant having to leave his other duties in order to respond to a hyperbaric emergency and we were told that his employer was supportive of his role and there was also another colleague to call on in an emergency situation. The consultant told us they provided out of hours cover. When we asked about cover for holidays, the consultant told us that these were covered by another doctor who worked at the unit and lived close by. The consultant told us that both himself and the centres other named doctor could respond "quickly" in the case of an emergency as they both lived close to the centre. We reviewed the arrangements for medical cover and noted that the medical rota clearly identified which doctor was to be contacted when required.

Major incident awareness and training

- There were back-up generators in the event of a power failure during treatment.
- The facility director told us staff were trained in deluge and fire hose simulation. Practice drills were carried out on a regular basis in order for staff to be ready to use them if it became necessary. Records we reviewed confirmed this training had taken place in the 12 months prior to our inspection.

- We reviewed the 'on-call rota' for the unit; this confirmed that staff were able to open up the chamber at any time. The on call rota confirmed that staff were available 24 hours a day 365 days a year, in an emergency.
- The consultant told us it was unlikely another doctor would be called upon other than himself or the other named doctor and it had never been necessary to do so. If this were ever to happen, the resident medical officer from a nearby hospital would be called upon.
- The consultant told us he saw the patients in pre-assessment, but not again after that as they were treated on an outpatient basis.
- The European code of good practice for HBOT indicates during any session a hyperbaric physician forms part of the minimum team for multi-place chambers (European code of good practice for hyperbaric oxygen therapy, 3.3). This code of practice indicates "During any session the functions involved are: Supervision of the treatment (medical aspect and safety of operations)".
- The code states "The location of the individual members of the minimum team is the responsibility of either the duty physician or duty supervisor, however the whole nominated team should remain in the facility and immediately available". Whilst a doctor was not at the location at all times for elective patients we were assured by the facility director and the medical director, that a doctor would be available at this hyperbaric unit in an emergency.
- We raised the potential risk's relating to the time it would take for a doctor to attend the service should they be required. It was noted that this risk had not been addressed formally as part of the units risk assessment/management systems. The provider provided an up to date completed risk assessment within 24 hours of our inspection.

Are hyperbaric therapy services effective? (for example, treatment is effective)

The unit opened routinely five days a week between 9am and 5pm and provided two, two-hour elective treatment

sessions each day. There was seven day, 24 hour availability for emergency treatment. As a category 1 facility, ventilated patients could be accommodated and staff told us sedated, ventilated patients would be overseen by a trained anaesthetist. The facility director told us as a member of the British Hyperbaric Association (BHA), the unit complied with standards such as the Health and Safety at Work Act, and the Diving at Work regulations. Records we reviewed confirmed this.

All of the chamber attendants or chamber operators were professionals and worked as trainers in their specialist role on a part time basis. The facility director told us they were assured of staff competency as most had worked there for years and acted as trainers in their specialist areas. Staff completed external training before acting as chamber operators and attendants. We found the service monitored patients' outcomes in with the minimum requirement for submission to NHS England.

There was an appraisal and performance review process. We found there were arrangements for clinical supervision, staff and one to one meetings and appraisal for staff.

Peer reviewed literature was used to benchmark the treatment given by staff at the unit. The consultant confirmed this approach and told us that staff were part of a close network of hyperbaric oxygen treatment providers and the treatment was the same nationally. Staff told us the average time from referral to treatment was roughly six weeks.

Evidence-based care and treatment

- Peer reviewed literature was used to benchmark the treatment given by staff at the unit. They said care was "protocol driven" from both the Royal Navy and United States Navy. The treatment 'tables' used were underpinned by recognised international diving guidance.
- In order to be a member of the British Hyperbaric Association (BHA) the unit had to comply with standards such as the Health and Safety at Work Act, and the Diving at Work regulations.

- In discussion with us the facility director told us that peer reviewed literature was used to benchmark the treatment. The consultant confirmed this approach and told us staff are part of a close network of hyperbaric oxygen treatment providers.
- There was no set response time for emergency treatment. Senior staff informed us literature suggested divers respond better the sooner they were treated for decompression injury.
- We found the service monitored patients' outcomes in line with the minimum requirement for submission to NHS England. These requirements included, the facility being a member of the BHA, and compliance with the BHA publication 'Health and Safety for Therapeutic Hyperbaric Facilities A Code of Practice.
 - Staff told us the BHA planned to carry out an audit every three years. We noted the last BHA appraisal was carried out in in 2015. Following the BHA appraisal the facility was judged to be operating in line with current BHA best practice guidelines.
 - In discussion with us staff reported that they had witnessed significant wound healing, however we saw no records of audits of the effectiveness of treatment.

Nutrition and hydration

- Staff told us patients were able to take a cold drink into the chamber with them to have during the break in treatment. This was confirmed by patients we spoke with.
- There were facilities to give patients food or drink within the unit. We noted that there were hot drinks such as tea and coffee available. Patients could also obtain hot food the hospital restaurant housed in an adjacent building.

Pain relief

- As the majority of patients were elective, they brought their own pain relief in to the unit with them. Their property was in a locker during treatment so keys would have to be passed via the airlock for staff to obtain them if required.
- None of the patients we spoke with had required pain relief during treatment. One patient told us they had

once experienced mild pain in their ears. The patient described to us how staff had paused the pressure increase and reminded them how to relieve the pressure in their ears.

Patient outcomes

- Staff told us they submitted outcome data on both a quarterly and annual basis to NHS England and to the BHA.
- The standard contract for NHS England required the unit to comply with key generic outcome measures. These included: compliance with national access and time to treatment contribution to and compliance with national audits and guidelines including NICE guidelines; pre and post treatment quality of life measures, (staff told us patients were invited to complete a quality of life questionnaire before treatment and three months after treatment); the percentage of divers returning to a pre morbid state; the average time from referral to treatment; the percentage of patients who felt information was adequate and they felt safe.
- Results of the pre and post treatment questionnaires were made available; patients we spoke with confirmed they were pleased with the outcomes they had seen so far.
- Staff told us in an emergency the timescales for 'time to treat' patients may be prolonged due to factors entirely outside of the unit's control.
- The consultant sent a discharge letter to each patient's GP with a summary of the treatment they had received.
- Patients would be referred to an ear, nose and throat (ENT) specialist if pressure related ear problems occurred after treatment had stopped. Records we reviewed confirmed this.

Competent staff

• All of the chamber attendants/chamber operators were healthcare professionals. Their backgrounds included critical care, operating department practitioners, paramedics and anaesthetic practitioners. Records we reviewed confirmed that staff are sent on external courses to ensure and confirm staff competencies are met. All staff are

instructors in various subjects related to hyperbaric medicine and teach for other agencies. As instructors and tutors staff are regularly assessed by colleges and universities. A great number of the facilities staff teach at academic level for universities.

- Staff completed external training before acting as chamber operators and attendants.
- Staff told us when a new team member began work at the unit they work through an induction workbook.
- The facility manager told us competencies were not rechecked as a routine process, as procedures did not change. However an exception to this was if a staff member was away from work for an extended time. In which case on return to work they would undergo revised induction period.
- We also noted that all chamber staff acted as trainers in their specialist area. The training offered by the unit meant that staff worked as both national and European trainers.
- Staff said they had opportunities to attend relevant learning events. The facility manager confirmed this and told us that the unit had brought in an external 'educationalist' from a local university to ensure staff had access to the most relevant and update training relative to their particular areas of specialism.
- Chamber staff had an annual 'dive medical' to ensure they were fit to work inside the chamber.
- The consultant, who also acted as the medical director for the service confirmed that doctors working within the unit, kept their own records as part of the General Medical Council (GMC) medical appraisal process.
- We found BHA guidelines were followed in the case of written medical designated responsibilities for a hyperbaric unit. In our discussions with staff, it was clear they could demonstrate knowledge and competence.

Appraisals and clinical supervision

• The facility director held responsibility for the performance of staff. Records we reviewed confirmed that there was a process for appraisal and performance review to take place.

- We reviewed documents which confirmed that clinical supervision, one to one meetings and appraisals of all staff had taken place.
- All staff had had an appraisal: information sent to us by the unit before our inspection showed 100% of chamber staff appraisals were up to date.

Multidisciplinary working

• We were told of multidisciplinary working with other services within an independent hospital such as cardiology, psychiatric services and the HEMS' specialist transport teams.

Seven-day services

- The unit opened routinely five days a week between 9am and 5pm and provided two, two-hour elective treatment sessions each day.
- There was seven day, 24 hour availability for emergency treatment.
- Supporting diagnostic services such as X ray or CT scans were available on site through an independent hospital.
- Cover was arranged by a system of availability, there was an on call rota.
- In the event of an out of hour's emergency, telephone contact cover was provided by either the consultant, facility manager or designated other person.

Access to information

- There were electronic patient records which were securely accessed by unique staff log in.
- Additionally paper records were used to record care and treatment of patients and these were readily accessible to staff. All of the patient files we reviewed were clear, concise and readily accessible.

Consent, Mental Capacity Act and Deprivation of Liberty Safeguards

- A consent policy was in place; we noted the policy included reference to the Mental Capacity Act.
- Senior staff obtained verbal and written consent for treatment in pre-assessment clinic.

Are hyperbaric therapy services caring?

Staff spoke about patients in a sensitive manner. We noted that staff built up a relationship with patients over the course of treatment and learned more about them as individuals. We found this enabled staff to give supportive, holistic care to patients.

We spoke with five patients who said staff were compassionate and looked after all their needs. All of the patients we spoke with told us that nothing was too much trouble for chamber staff. Patients told us of situations where staff had been especially kind or thoughtful to them. We saw staff had empathy and were aware of the whole care experience for patients, not just their hyperbaric treatment in isolation.

We found the staff at the hyperbaric unit to be compassionate and caring. We observed staff and patients interacting positively together before, during and after treatment.

Compassionate care

- We found the staff at the hyperbaric unit to be compassionate and caring. We observed staff and patients interacting positively together before, during and after treatment.
- Staff spoke about patients in a sensitive manner. Staff told us they built up a relationship with patients over the course of treatment and learned more about them as individuals. Staff we spoke with all said they found this enabled them to give supportive, holistic care and to patients.
- We spoke with five patients face-to-face. They told us staff were compassionate, looked after all their needs. All of the patients we spoke with said that no matter what they had requested, or needed nothing was too much trouble for staff at the unit.
- Comments we heard from patients included "All the staff are lovely." Another patient commented; "The staff are always really calm, polite and caring, nothing is too much trouble."
- We were shown patient feedback forms and noted the following comment;

They are a really caring people." Another comment read; "I cannot say anything bad They are all lovely."

Understanding and involvement of patients and those close to them

- Staff told us patient surveys were completed and sent to NHS England. The unit had received very positive comments.
- Patients told us staff were always warm and approachable and would take time to explain things or talk through worries with them.

Emotional support

- We saw staff had empathy and were aware of the whole care experience for patients, not just their hyperbaric treatment in isolation.
- One patient told us how they were very nervous before their treatment but the staff were adept at putting them at ease and as a result, they have been able to go through with the treatment with no problems.
- This was confirmed by other patients we spoke with, who all told us that staff were "wonderful."

Are syperbaric therapy services responsive to people's needs? (for example, to feedback?)

Hyperbaric facilities are few in number in England. This is due to the specialised nature of the service.

We found emergency access to the unit was good. Staff could be called in and the unit opened within an hour outside of normal working hours.

The timing of the morning and afternoon sessions provided flexibility for elective patients. Staff told us the average wait from referral to treatment was roughly six weeks. Staff told us they were committed to ensuring patients were treated fairly and equally regardless of their circumstances.

Service planning and delivery to meet the needs of local people

- Hyperbaric facilities are few in number in England. This is due to the specialised nature of the service provided.
- The unit was located near the coast and could respond to diving emergencies. Patients were also referred from hospitals and other care providers in the North West of England and further afield in some cases. There was a large 'catchment' area but most patients were within one to two hours' drive from the unit.
- The timing of the morning and afternoon sessions meant that most patients did not have to set off very early or return home late. There was flexibility for elective patients to attend either a morning or afternoon session on weekdays.
- The unit opened routinely five days a week between 9pm and 5pm and provided two, two-hour elective treatment sessions each day.
- There was seven day, 24 hour availability for emergency treatment.

Access and flow

- We found emergency access to the service was good. Staff could be called in and the unit opened within an hour.
- Staff told us the average wait from referral to treatment was approximately six weeks. Records we reviewed confirmed this.
- Staff told us treatments were rarely cancelled or rearranged. Records we reviewed confirmed that there had been no treatment sessions cancelled in the 12 months prior to our inspection.
- We were told critically ill patients would be repatriated after treatment to an appropriate care facility via ambulance.Appropriately qualified professionals from the unit would support them during the transfer.

Meeting people's individual needs

• The chamber was situated in a room off a main reception area. There were lockers for patients to store valuables. Toilets and dining facilities were situated on the first floor. There was a waiting area for patients directly outside the chamber room, with, a seating area and tea and coffee facilities were also available to patients. There was also a TV for patients to watch if they were waiting for their treatment to begin.

- Space was adequate inside the chamber. Seats were removable to enable space for a trolley or wheelchair.
- The second chamber was accessible, as it was housed in the same main unit next to the first chamber.
- There was a portable toilet available in both chambers and staff could pass items in or out of the chamber via a smaller air lock.
- Staff were able to tell us how they work to try and meet the needs of claustrophobic patients. This included ensuring patients had the opportunity to make visits to the chamber. In order to make them as comfortable as possible prior to treatment, Patients visiting the chamber prior to treatment were encouraged to go in and out of the chamber with the door open, this was done to try and increase their tolerance of the confined space.
- After treatment for diving injury, patients received discharge information which included contact details for the unit should any concerns arise. They were also given advice regarding treatment they received, and advice on symptoms to be aware of following treatment
- Although it had not been required so far, staff were able to confirm to us that they could use an interpretation service should the need arise.
- The facility director assured us that in an acute situation the organisation would co-operate with local acute care providers, for the overall benefit of the patient. There was evidence of close working with ambulance providers and local hospitals.
- Patients were given written information at the pre assessment visit. We learned that the leaflets were only available in English.
- The BHA guidelines indicate discharge planning should begin at pre assessment, especially for patients who require follow on care. We did not see any evidence of direct discharge planning, however the patients we saw receiving treatment were all outpatients and seemed to be independent.

Learning from complaints and concerns

- We saw patient information displayed in the unit, which informed patients of how to make a complaint if they chose to do so.
- We noted the unit had not received any complaints in the 12 months prior to our inspection. However the unit did have ratified process for ensuring any complaints could be dealt with satisfactorily, should they arise.

Are hyperbaric therapy services well-led?

The unit was well led. Strong clinical and professional leads were provided by the medical director and the registered manager who was also the facility director. Senior staff and all the members of the team with whom we spoke shared a strong commitment to providing the best possible service to patients. We found there was a vision and set of values for the Murrayfield Hyperbaric Medical Unit. Staff clearly understood their role in achieving the vision for the service.

We found a performance framework to identify, assess, monitor, and respond to performance issues. Staff told us they received an annual appraisal. There were staff meetings, which staff confirmed were used to involve staff in developing the service. We found that there was no service specific risk register in place at the service.

There was a small team at the unit and staff worked well together. We found the facility director and the clinical director to be knowledgeable and skilled. They had positive attitudes towards good quality care. Both the facility director and the medical director were visible and approachable. Investment was made in equipment to further improve the service and the service participated in national research.

The leadership, governance and culture supported the delivery of high quality person centred care.

Vision and strategy

• We found there was a clear vision and set of values for Murrayfield Hyperbaric Medical Unit. This aimed to provide high quality care for both emergency and elective patients. Staff understood their role in achieving the vision for the service.

Governance, risk management and quality measurement

- We found a clear performance framework to identify, assess, monitor, and respond to performance issues should they arise.
- There was a specific job description and set of responsibilities for the consultant. This was in line with BHA guidelines, which state that there should be a written structure of responsibility for medical staff members.
- Records we reviewed confirmed that there were specific job responsibilities and responsibilities for the supervising chamber operator, chamber staff and the hyperbaric nurse.
- The provider had formal meetings and a clinical governance process even though the unit was small and staff saw each other very frequently and communicated daily.
- Hyperbaric services in England are few in number and the BHA was made up of a network of colleagues who worked in hyperbaric units. The service was a member of the BHA, which appraised them each three years. The facility director was previously on the project board of the BHA and the consultant was a member of the BHA clinical reference group.
- We saw that there was no service specific risk register in place at the service. We raised this with the medical director and the facility manager during the inspection. Both confirmed that whilst there was no register to record risks, they were well known and discussed regularly at team meetings. Within 24 hours of our inspection, documentation was received from the provider which confirmed that a service specific risk register was now in place and that potential risks to the service were recorded, monitored and where possible, mitigated.

Leadership

- We found both the facility director and medical director to be knowledgeable and skilled. In discussion with us they both had positive attitudes towards good quality care.
- The facility director told us there was both "informal and formal management" of staff. Records we

reviewed confirmed that staff received weekly informal support through staff meetings. This was further enhanced through regular meetings with the clinical director and annual appraisal.

• The facility director had a number of roles including, being the safeguarding lead for the unit and the Caldicott guardian for the service.

Culture within the service

- There was a small team at the unit and staff worked well together.
- Staff responded positively when we asked them if they felt valued. They told us that the management of the unit were always available, approachable and supportive.
- Staff told us there was a strong culture of promoting safety and high quality patient care.

Public engagement

- Patients were encouraged to complete a survey after their treatment. Staff collated results were sent them to NHS England.
- There was no other way for patients to provide views of the service, for example via the website or participating in patient engagement meetings. This could mean that patient views are not readily available to the unit managers.

Staff engagement

• Staff told us they received an annual appraisal and attended regular staff meetings, which allowed staff to be involved in the development of the service.

Innovation, improvement and sustainability

- The facility director told us it was more difficult to plan for sustaining the service in the longer term, due to 12-month block contract arrangements.
- The facility director took a lead role in the development of European standards in chamber design.

Outstanding practice and areas for improvement

Areas for improvement

Action the provider SHOULD take to improve

- take action to ensure the emergency resuscitation equipment held outside the chamber is checked on at least a weekly basis
- ensure that medical cover is risk assessed and reviewed at regular intervals
- ensure that medicines are checked regularly and expiry dates are monitored.