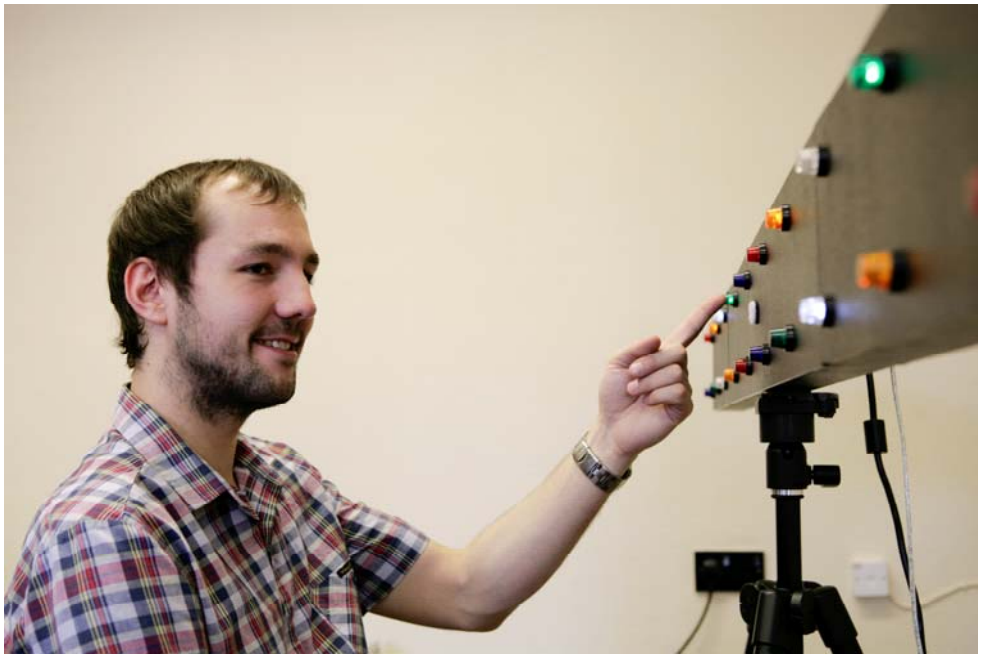
Sealladh

Evaluation Report



A Community Based Approach to Rehabilitation of Combat Veterans with Sight Loss Sustained due to Brain Injury

visibility

West Dunbartonshire Council

Title: Sealladh:
A Community Based Approach to Rehabilitation of Combat Veterans with Sight Loss Sustained due to Brain Injury

Authors: Shelagh Palmer and Laura Campbell

Published September 2009: Visibility
2 Queens Crescent
Glasgow G4 9BW

Distributed by: Visibility
2 Queens Crescent
Glasgow G4 9BW
0141 332 4632

The report is available in large print, Braille, audio and electronic format. Please contact Visibility on 0141 332 4632.

Visibility is the trading name of GWSSB (formerly Glasgow and West of Scotland Society for the Blind). GWSSB is a company registered in Scotland, limited by guarantee with its registered office at 2 Queens Crescent, Glasgow, being a recognised Scottish charity.
Registration number: SC 116522
Scottish Charity number: SC 009738

1.0 Introduction

Acquired brain injury has been described as the silent epidemic sweeping the world[1]. For those who suffer a brain injury, there can be life changing consequences. About one third of those experiencing an acquired brain injury survive with minimal impact, with another third suffering permanent deficits, often severe, and the final third do not survive. Physical disabilities such as paralysis, language deficits, coordination and orientation difficulties, long term and short term memory difficulties, and visual problems are just few of the challenges people with brain injury encounter.

1.1 Sealladh

Sealladh grew out of discussions between Visibility and colleagues from West Dunbartonshire Council with a remit for dealing with brain injury. Anecdotal evidence suggested a group of people who were experiencing sight related difficulties due to acquired brain injury. This would fit with the finding that between 30% and 35% of the population diagnosed with brain injury have associated neurological visual impairment[1]. Within this group in West Dunbartonshire, it was suggested that there was a significant number of people with acquired brain injury who had a military service background. This is borne out by reports from the US Department of Veterans Affairs in which they identify that two thirds of injured US casualties returning from Iraq had traumatic brain injuries with ocular trauma the most common finding.

Visibility made contact with the lead researcher in this field, Dr Greg Goodrich at the Department of Veteran Affairs, Palo Alto, California. Recent work by Goodrich's team has used Neuro Vision Technology (NVT) as a vision rehabilitation tool for traumatic brain injury and polytrauma (patients with multiple, severe injuries). The information gathered in the initial stages of the project shows that NVT provides a unique and valuable tool in the rehabilitation of visual function in patients with visual field loss and/or neglect[2]. Fife Society for the Blind has pioneered use of this equipment in Scotland with stroke patients. Using this emerging evidence Visibility applied to The Scottish National Institution for the War Blinded (now Scottish War Blinded, SWB) to fund a two year rehabilitation project. The project was called Sealladh which is Scottish Gaelic for 'sight'.

Visibility's Sealladh project offers an innovative, community based service to ex service men and woman who have neurological sight difficulties caused by brain injury. The overarching aim of Sealladh is use NVT as part of a person centred, tailored, community based approach to teach people with neurological visual impairment to maximise use of their remaining vision and to become as independent as possible.

1.2 Evaluation Report

Sealladh was established in October 2007 and by the end July 2009, 17 people with a military background had been trained. For many of them, participating in Sealladh has been life enhancing, for some life changing. This report tells their stories and describes the impact of the training on their lives and their families. It also documents the views of key professionals and looks to the future for this innovative rehabilitation programme.

2.0 Background Information

Sealladh brings together several worlds; brain injury, neurological visual impairment, rehabilitation and military service. This is unique in the UK, and draws on the work undertaken in California at Palo Alto, by the US Department of Veterans.

2.1 Eye Injuries in Warfare

Eye injuries[3] in World War 1 constituted between 2.4 and 3% of all injuries, whilst in the Gulf war, they accounted for 13%. The view is that the increased use of explosive devices has led to an increased number of those with traumatic brain injury. Recent work with veterans by Goodrich et al 2007[2] demonstrates the rate of visual impairment in blast related injury was 52% compared to 20% for all other sources of injury.

2.2 Neurological / Cortical Visual Impairment

Neurological visual impairment also known as cortical visual impairment describes sight difficulties caused by damage to the part of the brain related to vision rather than damage to the eye itself. In essence, people with cortical visual impairment have difficulty using what their eye sees.

Damage to these visual pathways can disturb information processing in such a way that recognition is impaired and/or analysis of the complexity of the visual scene is impaired. The

pathways serving eye movements can be damaged and this means that rapidly moving information may not be seen.

2.3 Brain Injury

Brain injury is often spilt into two categories - traumatic brain injury (TBI) and acquired brain injury (ABI). Traditionally, services aimed at supporting people with brain injury have also been split into these two categories. Sealladh supports both TBI and ABI.

The UK Acquired Brain Injury Forum describes brain injury in the following terms:

> "Acquired Brain Injury is non-degenerative injury to the brain that has occurred since birth. It can be caused by an external physical force or by metabolic derangement. The term 'acquired brain injury' includes traumatic brain injuries - such as open or closed head injuries, or non-traumatic brain injuries - such as those caused by strokes and other vascular accidents, tumours, infectious diseases, hypoxia, metabolic disorders and toxic products taken into the body through inhalation or ingestion."

A traumatic brain injury is caused initially by outside force but also includes the complications which can follow such as damage caused by lack of oxygen and rising pressure/swelling in the brain. It can be seen as a chain of events beginning with the first injury which occurs in the seconds after the trauma, being made worse by what happens in the minutes and hours after this and depending on access to skilled medical intervention. By far the largest group who would be classified as having an acquired brain injury are those who have suffered a stroke and over half of stroke survivors have visual problems, yet many go untreated[4].

2.4 Impact of Sight Loss

Visual impairment is often undiagnosed during the initial treatment stages of a head injury with Gianutsos[4] reporting that about half of all head trauma patients exhibit visual system disorders that had not been assessed. Sonia McDermid from the British and Irish Orthoptic Society states:

> *The effects of visual impairment on stroke survivors can be significant and have damaging effects for the patient and carers. It can limit the quality of life because all aspects of*

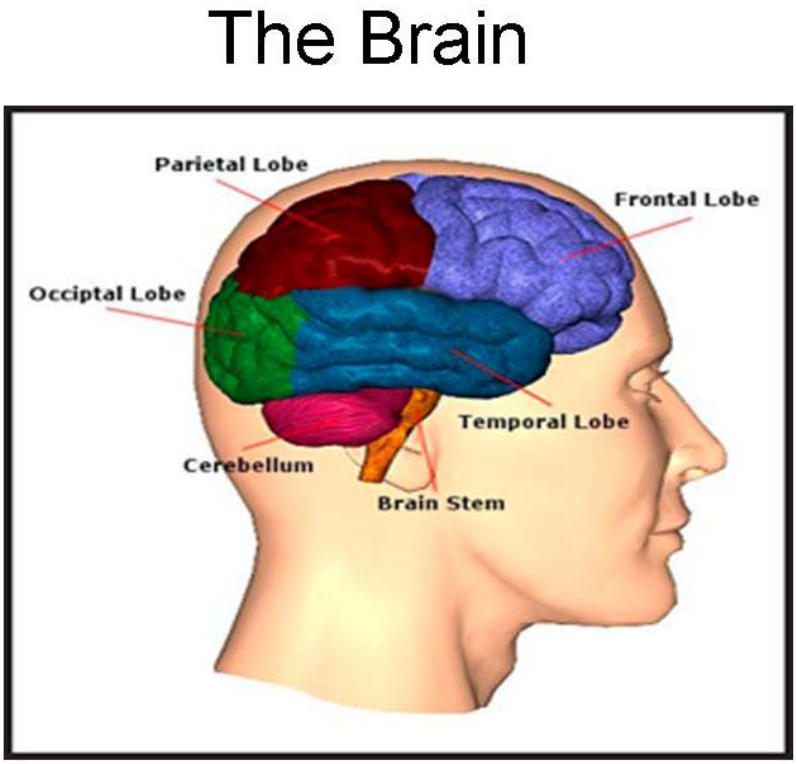
self care can potentially be affected such as preparing meals walking independently, reading, watching TV…. In my experience just 25% of stroke survivors currently get referred to eye specialists.

For the majority of people, sight loss means that things they could then do easily when they could see, they now can't do at all, or have to learn to do differently. Not having the knowledge, confidence or support to explore how to do things differently leads to loneliness, isolation and ill-health with many gradually withdrawing from life as they knew it. Brain injury can mean that in addition to visual impairment, there are problems with physical disabilities, short and long term memory loss and often personality or behavioral changes which exacerbate the difficulties people face. Receiving support and appropriate rehabilitation can intervene in this downward spiral. Goodrich notes that the progress in rehabilitation of activities of daily living may be impeded and hinder other therapies to improve balance and walking in cases where the visual loss is unrecognised. For veterans this already challenging experience may be compounded by the considerable and ongoing effects of Post Traumatic Stress Disorder.

2.4 Neuro Vision Technology (NVT)

Neuro Vision Technology is a unique training package developed in Adelaide, Australia. It trains people with neurological visual impairment to maximise use of their remaining vision and to become as independent as possible[5].

The NVT Scanning Device is an assessment tool for determining the presence of Homonymous Hemianopia, visual field loss, visual processing deficits and visuo-spatial neglect. The device comes with a software training programme of standardised compensatory scanning exercises to enhance the client's functional use of their residual vision. The training improves scanning into the deficit field, provides exercises to promote visual memory, spatial reasoning and to improve saccadic and pursuit movements. The NVT Scanning Device is portable and training can be carried out in the person’s home or any other suitable location.



3.0 Sealladh Project

3.1 Proposal

The pilot project funded by SWB outlined the following parameters for the project.

- Sealladh will identify and work with visually impaired veterans who have sight loss due to brain injury
- Sealladh will offer a tailored support package and for those who are not suitable for the training package will be offered other Visibility services
- Sealladh will provide training support, advice, information and links with other agencies
- Sealladh will teach people to make better use of their remaining sight
- Sealladh will actively demonstrate that in many cases lifestyle choices are still possible
- Sealladh will work with veterans families to help them develop a level of understanding of the issues faced by the patient

- Sealladh will develop a multi disciplinary model of working and evaluate the effectiveness of the model of service delivery to the client group

The proposal describes three phases for the pilot project with the first phase as identifying veterans, recruiting and training staff to deliver NVT programme. The second phase concentrating on service delivery and the final phase is evaluating the effectiveness of the model of service delivery.

4.0 Brain Injury and Visual Skills

Good visual skills are necessary for efficient information processing and if the visual system is damaged every task can seem difficult. The range of visual skills that can be affected by brain injury are listed on Table 1.

Visual Skills	**Function**
Tracking	The ability of the eye to move smoothly across a printed page or while following a moving object.
Fixation	Quickly and accurately locating and inspecting a series of stationary objects, such as words while reading.
Focus Change	Looking quickly from far to near and back without blurring.
Depth perception	Judging relative distances, how far or how near.
Peripheral Vision	Monitoring and interpreting what is happening in the surrounding field of vision.
Binocularity	Using both eyes together as a team.
Attention	Keeping focussed on a particular activity while interference such as noise or crowds is present.
Visualisation	Accurately picturing images in the “mind’s eye”, retaining and storing them for future recall.
Near Visual Acuity	Clearly seeing, inspecting, identifying and understanding objects viewed within arm’s length.

Distance Acuity	Clearly seeing, inspecting, identifying and understanding objects viewed at a distance.
Vision Perception	Understanding what is seen.

Table 1

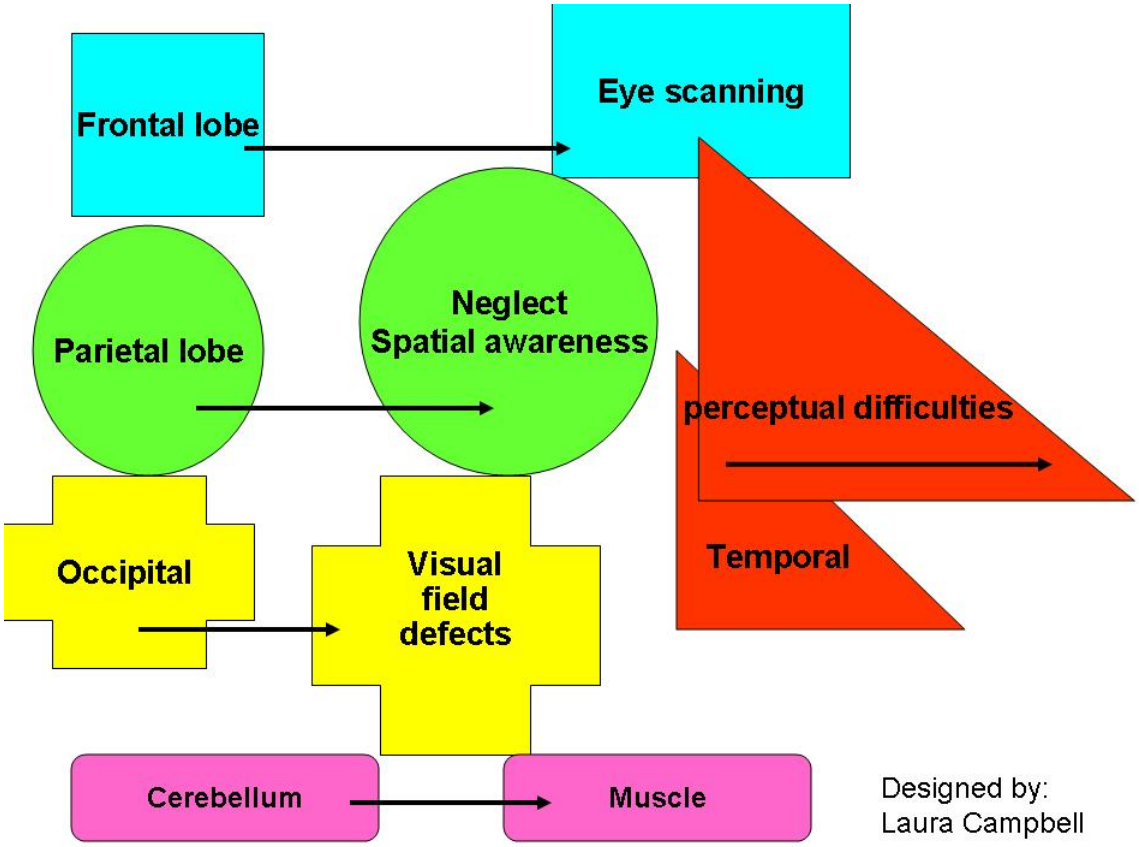
Most commonly, those who have an acquired brain injury lose part of their side vision, often half of their vision, either to the left or to the right. This condition is called Homonymous Hemianopia and occurs when there is a lesion in the occipital lobe of the brain. Hemianopia is frequently associated with visual neglect. Neglect occurs when there is a lesion in the parietal lobe and is characterised by a persistent lack of awareness of the left or right of the body such as eating from only one side of the plate, shaving one side of the face, or brushing hair on one side only.

Hemianopia

The difficulties that people with Hemianopia with or without neglect might present with include:

- An inability to see one side of the surroundings
- Bumping into objects or people on one side
- Difficulty locating objects which seem obvious
  - Ignoring objects and people is a sign of neglect and may result in injury to self on one side
- Difficulty moving through crowds
- Difficulty in recognising objects or reading print
- Getting lost in familiar surroundings

People experiencing Hemianopia and /or visual neglect can be taught to scan to compensate for the limited field of vision and /or an a lack of awareness on one side. This forms the basis of the NVT training package.



5.0 Sealladh Training programme

Sealladh offers a unique person centred approach to each participant by providing an individually tailored rehabilitation training programme to suit their specific needs. The process is primarily to identify the impact of sight loss on the person and what rehabilitation needs the person may have. The process is as follows:

- Carry out a functional visual assessment
- Arrange a clinical visual assessment (optional)
- NVT assessment
- NVT training
- Indoor /Outdoor mobility training
- Rehabilitation tasks

5.1 Functional Visual Assessment

Using a range of optometric tools, scanning, tracking, light sensitivity, pupil reaction, understanding of environment, visual acuity and visual fields are assessed. This information is then explained to the participant and given to the GP for referral to an ophthalmologist if a clinical visual assessment is required.

5.2 Clinical Visual Assessment

This assessment is carried out by an ophthalmologist and looks at the health of the eye and diagnoses any health and visual problems.

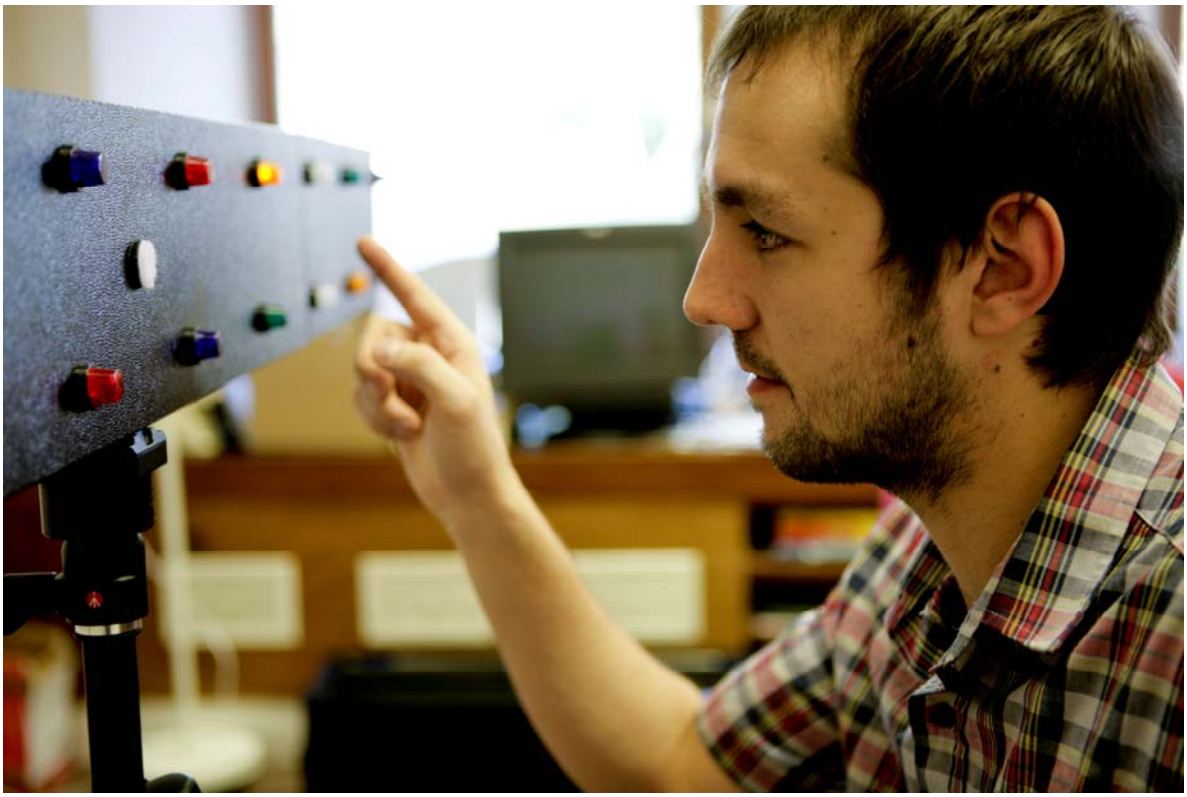
5.3 NVT Assessment

By using NVT technology, the information gained in the functional visual assessment is further investigated. NVT technology is the use of an electronic system of coloured lights which are linked to a computerised software programme. The information gathered from the participants is programmed into the computer and an individualised programme is then devised. This programme assesses visual field, the person's ability to scan to multiple visual stimuli, visual memory and speed of interpretation and communication.

5.4 NVT training

The NVT technology is used to train the participants in compensatory static scanning technique. The programme begins with 5 – 8 sessions on the light box teaching the scanning technique with the first stage centred on teaching the person to

move their head to the side(s) in which they have limited vision. This technique is then built upon using different patterns of light and different colours. To help with visual memory problems, the person is asked to identify what is different on the left hand side from the right. This requires them to memorise, one side and compare with the lights offered on the other side. For those who are colour blind, they are asked to identify the light not the colour.



The light box is also used to promote skills of using vision with moving images which helps people in situations such as recognising where they are when travelling by bus or train. System scanning is also taught which teaches people to track and identify, a skill which is useful in many situations such as finding a tin of tomatoes from several shelves of tinned vegetables at the supermarket.

Pen and paper tasks are also used to heighten visual skills and be aware of processes. This can lead to regaining and / or improving the ability to read and write which may have been affected by the brain injury.

5.5 Indoor and Outdoor Mobility

This is a major component of the training as many people experience difficulties with mobility as a result of their visual field loss which impacts on their confidence and independence. Common difficulties experienced can include:

- Light sensitivity
- Bumping into people or objects
- Veering to the side of good vision
- Difficulty with under foot hazards and clues

The training initially starts indoors using a structured and safe environment allowing the participant to practice their scanning technique and build confidence. Target practice is used where a series of coloured targets are placed around the home and the person has to identify where they are. The targets are moved frequently helping people to use their scanning as an everyday activity. This then progresses to outdoor training in a variety of familiar and unfamiliar environments. For many people, it is about getting them mobile within their own environment, for example from their home to the end of the street. Again this is built up in stages so that they are confident in crossing roads, going to their local shops, getting on buses and trains.

5.6 Rehabilitation tasks

Rehabilitation training will cover any practical difficulties the participant is experiencing as a result of their sight loss. Various aids and adaptations can be used to heighten independence and help people with everyday tasks such as making a cup of tea or preparing lunch.

6.0 Sealladh - Initial Stages

Sealladh went live in October 2007 with the appointment of a qualified, experienced rehabilitation officer and a project co-ordinator. Both participated in a three week intensive training programme run locally by NVT Australia. The training included clinical aspects of acquired brain injury, the NVT technology used, static scanning and rehabilitation skills for people with acquired brain injury including working with patients.

6.1 Eligibility Criteria

The eligibility criteria for Sealladh were defined as ex service personnel, with neurological sight loss, located within the area of West Dunbartonshire Council. This geography was identified as there was a suggestion of a higher than average number of veterans resident here due to the proximity of two Naval bases at

Faslane and Coulport. Also there were existing links with the professionals from the local Acquired Brain Injury Team and Acquired Brain Injury Strategy Group who contributed to the project development. These local contacts were not only invaluable in helping to identify and provide ongoing support to the client group and but also in providing specialist support to the project worker.
Given the narrow eligibility criteria, identifying possible participants was slow to gather momentum and in discussion with SWB it was agreed that whilst West Dunbartonshire would remain the priority area, the service would be offered to other geographical areas covered by Visibility services which include Glasgow and the West of Scotland.

6.2 Publicity

A wide range of organisations may know of, or currently support someone with a brain injury that could benefit from the project. A list of key professionals and agencies working in the following areas was drawn up:

- Military
- Local authorities – from sensory impairment teams
- Brain, addictions and criminal justice teams
- NHS Acute and Community teams
- NHS Stroke Units and eye care professionals including orthoptists, optometrists and ophthalmologists
- Acquired Brain Injury Charities

The full list of those contacted is available in appendix 1. Detailed literature was sent out with the option of a formal presentation or informal talk to staff, participants and family members. Leaflets were specially design to provide information about the project and to encourage both professional and self referrals.

7.0 Service Delivery

From October 2007 to July 2009, there have been 17 referrals of ex service personnel to the project. A profile of all those participating in Sealladh training is summarised in appendix 2

7.1 Age, gender and geography

The participants have been predominately male, with 15 males and 2 females taking part with an age range from 29 to 86.

Age Range	Male	Female	Total
20- 29	0	1	1
30- 39	0	0	0
40- 49	4	0	4
50- 59	3	1	4
60- 69	2	0	2
70- 79	4	0	4
80+	2	0	2

7.2 Pattern and Source of Referrals

In the early days of the project, between October and December 2007, three referrals had been made to the project, all of whom had a traumatic brain injury. During 2008 there were another 8 referrals and in the first six months of 2009, there were 6 referrals.

The pattern of referrals suggests an initial impetus just after the project began which slowed down and started to pick up again in 2009.

	2007	2008	2009	Totals
Traumatic	3	3	1	7
Acquired	0	5	5	10
Per month	1.5	0.7	0.9	0.8
Totals	**3**	**8**	**6**	**17**

The type of head injury referral also changed with time, commencing with traumatic head injury in 2007 but dominated by acquired head injury in 2009. This picture is influenced by the source of the referral with half of the acquired brain injury patients referred by Occupational Therapists.

Referral Source	Acquired	Traumatic	No
Stroke Unit Inverclyde Hospital	4	0	4
Visibility	3	0	3
WDC Brain Injury team	0	2	2
Self/ Family	2	0	2
SSAFFA	0	1	1
SWB	0	3	3
South Lanarkshire OT	1	0	1
Momentum	0	1	1
Totals	**10**	**7**	**17**

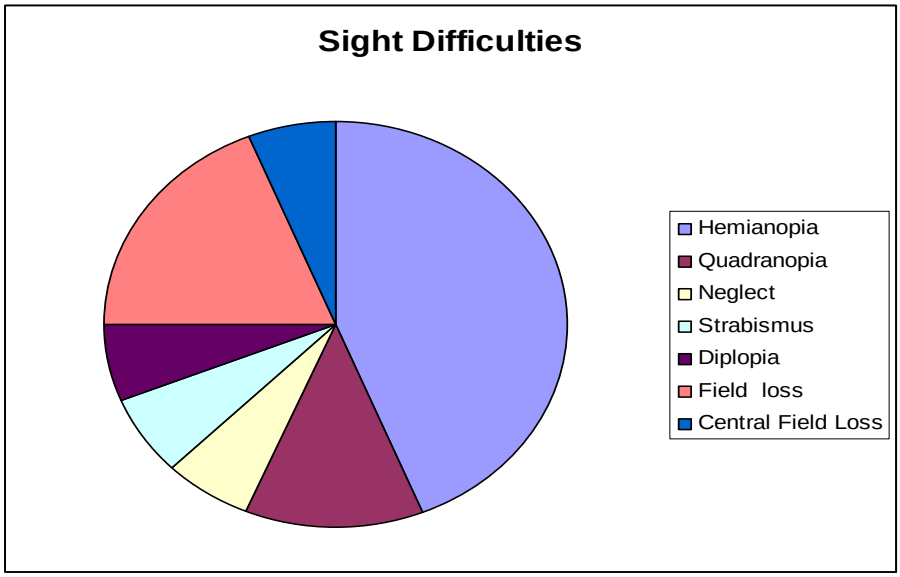
7.3 Geographical Spread

In terms of where people live, there is a spread of geographical areas with 5 living in Glasgow, 4 living in Inverclyde and 3 in Argyll and Bute.

Residents Local Authority	Nos
Argyle & Bute	3
Glasgow	5
Inverclyde	4
West Dunbartonshire	2
South Lanarkshire	1
East Dunbartonshire	1
Dumfries	1

7.4 Visual Problems

Out of the 17 referrals, 4 people are registered blind, and 8 are registered partially sighted with the majority having hemianopia. There were 4 people whose sight was not at a registerable level. Currently one participant is being supported to attend a clinical eye examination and is now in the process of being registered.



7.5 Number and Frequency of Sessions

The number of training and frequency of training sessions varies from participant to participant as one of the key features of the programme is that it is tailored to the needs and progress of the individual.

Two of the participants only commenced the training in June 09, so for them the final number of sessions is unknown. For the remaining 15 people, the number of sessions range from 3 to over 100. The number of sessions provided is influenced by the eye condition and the presence of memory loss and/or evidence of visual neglect with the latter categories requiring significantly greater input. For participants with visual neglect, about 25 – 30 sessions are required for the person to adopt the scanning technique. The number of sessions can markedly increase if memory loss difficulties are present.

The frequency of sessions varies for each individual over the duration of the programme and also from to individual to individual. Most commonly, participants were offered twice weekly dropping to once per week after the scanning technique had been established.

The average number of sessions given is 25 but the length of a session can vary. Within each session there is a set goal and the length of the session is dependent on how long it takes to achieve the goal.

A session on the light box might take 90 minutes but an example quoted by the project worker was playing a game of patience which took over two hours to complete but with huge results on confidence and sense of achievement for the person.

7.6 Timing of Training

Within the referrals, there is a wide range of timescales from the date at which the head injury occurred to the date of commencement of the Sealladh Training. In the most extreme case, one participant had a stroke twenty eight years ago when she was 28, she is now 56.

> *"Was on leave and went back to my unit and that is when I had the stroke and ended up in the military hospital. I was only 28, discharged and pensioned off. Folk that know me, know I canny see especially on the left. I bump into things all the time, steps cause me real problems and I fall quite a lot."*

The referrals from hospital based occupational therapists are patients who have recently had a stroke, with several being seen by Sealladh within 3 - 5 days of their stroke.

> *"Funnily enough it started with my eyes, we were at a wedding and I said to my wife I can't see the groom and then I couldn't feel my leg. Had a stroke on the Tuesday and a few days later the OT suggested the project. Project worker came to see me a couple of days later to explain but I still didn't realise I had a sight problem. She then used the light box and it dawned on me what I couldn't see."*

The length of time from the brain injury incident to commencement of the training didn't seem to impact on the outcome of the training. However, it does impact on the number of sessions required as people who have lived with sight difficulties for any length of time have developed their own strategies. For many there is a period of unlearning required before they can adopt new techniques.

7.7 Outcomes

A framework of outcomes were developed to record the progress of the participants (appendix3) . Of these outcomes, the project worker was asked to identify how many of the 17 participants, had made progress against the outcomes. At the time of evaluating the data, two of the participants have only just begun their training and whilst they have already progressed in their ability to scan, they have not been included in the table below.

Improved ability to use compensatory scanning	13
Increased confidence	15
Increased independence	15
Improved performance on everyday tasks	15
Increased outdoor mobility	14
Less reliance on others	14
Registration as blind or partial sight	3
Additional aids and equipment	5
Improved housing	3
Return to work	3

The scanning technique was not the most useful intervention for two participants because of their eye condition. One had double vision so the intervention was to support them to attend an

optometrist who prescribed glasses which improved his vision. A second participant had central field loss and only required training to rebuild his confidence.

In terms of improved financial situation, of the 17 participants, one person was eligible but choose not to take an application forward and five were not eligible. Of the remaining 11 participants, all are either receiving financial support or an application is pending. Of this group, 3 were referred from SWB and already had financial support in place prior to involvement in Sealladh.

8.0 Participant Experiences

From the group of 17 participants, the two most recent recruits have been excluded from the evaluation as they are still at the early stages of their training. A further two people could not be reached and a further two are in hospital. During the evaluation phase, 8 participants were available for and willing to be interviewed. The interviews were conducted using open questioning and an outcomes framework developed for the project (appendix 3).

All of those interviewed felt that taking part is Sealladh had been a very positive experience. This was also true for the five partners who contributed to the evaluation. They too, spoke highly of the impact of the project on not only their partners life but also their own and their life as a couple.

Several themes have emerged from the interviews which are considered within the context of case histories.

8.1 Increased Mobility

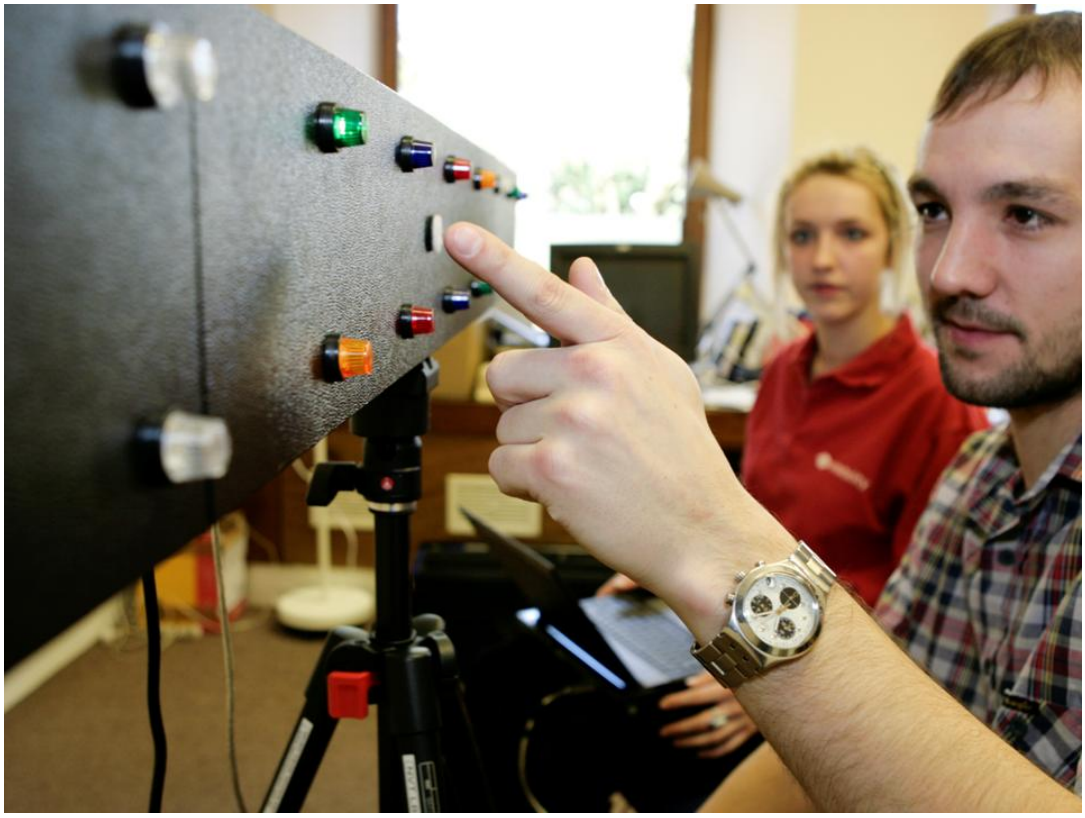
All of the participants interviewed said Sealladh has made a big difference to their confidence and for many their ability to get out and about and be independently mobile. For some, the impact of acquired or traumatic brain injury has been so debilitating that they have been housebound for several years prior to their involvement with Sealladh and for them life changing is an expression that they have used.

Tom

Tom is 68 and was in the Royal Navy and took part in the Falklands War. He was a volunteer on the local lifeboat for 30 years but in 2005, he fell down a set of stairs and sustained a head injury. He was airlifted to the Southern General Hospital and was operated on to remove a blood clot from his brain. After 14 days in intensive care, he was transferred to the Physical Disability Resource Unit (PDRU). It was there that he mentioned that he couldn't see and was taken to ophthalmology where he was registered as partially sighted. Tom uses a wheelchair outdoors and a Zimmer indoors because of the problems with his right leg and essentially has been housebound since the head injury.

Tom had been in touch with the local SSAFFA group. The local contact had been to a presentation on Sealladh and subsequently referred Tom.

> *"Laura came to visit and she brought a big black box and I thought what this is? She worked with me to keep moving my head. She then gave me pen and paper tasks. I found the target practice the most difficult but then I was coping with a zimmer as well. She took me out in my wheelchair and got me checking car number plates. Everything I can do now is because of Laura. I can't praise her highly enough. She suggested that I get a mobility scooter and the services people paid for it. If the weather is OK, I go out most days, meet my wife from work and get the shopping. I would have been a mental case if it hadn't been for this, its done wonders."*



For Tom, the purchase of a mobility scooter has been a very practical outcome but the whole experience makes him feel that he has not been forgotten and that his contribution to the services is being recognised.

8.2 Extent of sight loss

For those who have been left with Hemianopia as a result of their brain injury, many are unaware of the extent of their sight loss.

Fred

Fred is 85 and lives with his wife. He was in the Royal Navy towards the end of the Second World War. He had a stroke 4 years ago but felt he had been lucky not to have any lasting effects. He thought he was managing although he had fallen a few times and found escalators and uneven surfaces very difficult. Using the light box, Fred was astonished to discover that he was missing the extremes of his vision. An eye appointment was arranged and Fred got new glasses but was also referred to an ophthalmologist where he was registered as partially sighted. He was really shocked, he hadn't realised that his sight was so poor.

Fred worked hard on the scanning technique but has found it difficult because of a previous neck injury. However for Fred, there have been several gains. He now goes out walking again. He had given up because he had lost his confidence especially crossing roads. He had also given up reading the paper as it had become a jumble. The paper and pen exercises helped him with reading and the addition of new glasses allows him to read the paper again.

> "*the thing is I like a wee bet and the print is so tiny, I couldn't work out the form, now I can – though I'm not winning any more money*"

Both Fred and his wife said how much they enjoyed taking part in the Sealladh project and were sorry when it finished. They admitted that they enjoyed the attention and liked someone coming to see them on a regular basis.

8.3 From Patient to Person

It appears from the interviews that the person centred approach used within Sealladh and the goal setting framework allows people to feel that they are progressing and moving forward.

Bill

Bill is 55 and had stroke in 2008 and within a few days he had been referred to Sealladh. Like Fred, he too was unaware of the extent of his sight loss.

> *"I was quite overwhelmed to discover what I couldn't see but it was good to have the problem expressed by a practical experience. In the early days, I felt a bit lost and worried about the future. Laura gave us a plan and gave us hope. Of all the services Laura was the only one who said this is what we are going to achieve by when."*

Bill describes having the stroke as being taken out of normality and put somewhere else. He feels that taking part in Sealladh has brought him back and though he is not the person he used to be, he is doing more of the things he used to do. Bill thinks it was important that the Sealladh project was started soon after his stroke and commented on how supportive it was to have continuity from hospital to home, not his experience of other services.

Bill liked the approach of joint goal setting with him, and following of a plan. Each stage was clearly explained, finished with a de-brief and supported by written reports. He also commented on the flexibility and willingness to change and adapt the programme to suit his needs and his rate of progress.

> *"A map was laid out of what the process would involve and picked off the steps one by one. It felt like we were always moving forward and doing something with a positive outcome. What Laura did was give me my self respect back. I didn't feel like a patient, someone was focussing on me."*

Bill's goal was to return to work but to do so he would have to be able to travel independently. A programme was negotiated with Bill and involved building up in stages until Bill could travel independently from the village in which he lives into the centre of Glasgow. He admitted that it was scary at times but that he always felt well supported. Returning to work meant using a computer again and the adaptations and support were provided to enable this. Within 9 months of having his stroke Bill has

returned to work, is training for a 5k run and planning to have a game of golf with an old friend. Both Bill and his wife expressed several times they feel Bill would not be where he is today without the Sealladh project.

Bill's wife worried that her life would become that of a carer after her husband's stroke but that is not the case, not only has Bill got his life back but so has she.

8.4 Life Changing

Ian had been virtually housebound for several years due to his sight problems. Like Tom, he feels that Sealladh demonstrates a commitment and is amazed that someone picked up the phone and offered him such a life changing experience, as it was contrary to his previous experiences of accessing help and support.

Ian

Ian who is 41 had a head injury in 2003 which has left him with right field difficulties in his vision and Parkinson's disease. He was very anxious walking in crowds and became very disorientated when outside. He continually bumped into things and people and was worried that he would knock someone over because he could not see where he was going. Consequently Ian seldom went out and his life had shrunk to going to the corner shop for provisions.

> *"To be honest before life was pretty dire, I was really fed up and stayed in bed most of the day, I was almost housebound. Within a couple of weeks of starting the programme I could see the difference. One of the things I wanted to do was go to the supermarket. Moving around again outside was really scary but it has opened up a new way of life, the whole resource is just fantastic. I'm now working again, going into town, using the bus and the underground. I've started working for the Children Panel, I used to be one of those kids and I thought maybe I can help. This has made a big difference and turned my life around and my family say I'm who I was 20 years ago."*

For Ian, his confidence and mobility have changed hugely as has his financial situation due to an annual award from the SWB.

8.5 Reducing Danger

Families have been very open and honest about their difficulties, worries and concerns.

Jimmy

For Jimmy's family, they feel that not only did Jimmy learn just how unsafe he was, but also was taught strategies to keep himself safe.

> *"This project has saved my father's life, quite literally. He didn't realise he couldn't see anything to one side and would have been knocked over trying to get the bus from across the road. It is such a relief that he isn't discovering what he can and can't do on his own."*

Jimmy is 77 and his wife died six years ago. Like many of the other participants, the experience with the light box showed Jimmy just how badly his vision had been affected.

> *"I didn't realise how bad I am. I thought I would be getting home and be back driving – that was such a shock. Laura gave me exercises to do at home and one day brought a computer, I really enjoyed it, I've never worked one before. Succeeding at things make you want to do more."*

During one of the NVT sessions, whilst Jimmy was still in hospital, one of his daughters was there for the weekend

> *"I know when Laura has been, I can hear the difference in his voice, he is interested and excited about what he has done. She is very positive with him and encouraging and the fact that he is doing something and achieving, makes him feel better and I feel better because he does. Without this project, there was nothing. I wish we could have more."*

Almost everyday before his stroke, Jimmy would go to the local cemetery to tend his wife's grave. This required crossing the road outside his home and getting on a bus and doing the same on the return journey. Jimmy set this as his goal and recently with Laura accompanying him he has been to the cemetery and back home.

8.6 Coping with memory loss

Memory loss, aphasia, and difficulties with processing information accompanying brain injury are common complications and can make the Sealladh training programme more challenging.

Frank

Frank is 76, was in the RAF and served in the Suez crisis. He was registered as blind in 1997 but in 2005 was diagnosed as having a brain tumour. Fortunately the tumour was benign and operable. Following surgery Frank was very confused for several months and was very distressed that he couldn't see. He didn't remember that he was registered as blind. Frank was finding it difficult to remembering things. He couldn't remember how to make a cup of tea, where the towels were kept, how to shave. His wife had taken on the role of doing everything.

> *"For a long time, I felt sad, life had completely changed I felt I had lost Frank. It was like he was in a daze. What this did with him was help him to think again. I didn't realise that was what had happened to him and that is what he needed us to do. She took simple tasks and broke them down. She made a book to help him make a cup of tea. Each page had an instruction like get cup, switch on kettle. Through this programme life has started to build and it has made such a difference to both of us. Frank is interested in life again, it is great to have him back".*

On his first assessment, his wife wasn't hopeful that Frank would manage the technique but with patience and perseverance he progressed. The light box not only helped demonstrate his starting point, it also confirmed his progress and he and his wife can see just how much he has improved.

> *"Before Laura came, I didn't feel anything was worthwhile, she helped restore my faith in myself. Becoming self sufficient was just a no go area, but slowly the confidence is growing. I feel that I am normal once again, I can achieve things."*

8.7 Financial Support

Sealladh has not only worked with people on the rehabilitation skills but have also helped participants apply for financial support, alleviating some of their worries and concerns over money.

Betty

After medical discharge from the army because of a stroke, Betty returned to the small town in which she had grown up, that was 28 years ago. Everyone knows her. Betty keeps bumping into things and falling and although she makes light of it, she is embarrassed and a bit afraid that she may really hurt herself.

> *"I know it is only my pride that gets hurt when I fall in public but sometimes it isn't. I still bump into things but only when I forget to scan. I hear Laura saying turn to the left, turn to the left. The best thing has been that Laura made me a pair of glasses that I have taken to my computer class so the tutor now knows what I can see or rather can't see. She was amazed and has got me help in the class. I've used the glasses a lot to help explain to folk"*

Betty has applied to SWB for financial support and has had a walk in shower fitted to prevent her falling in the bathroom and she is overjoyed that they are helping to pay off her mortgage.

8.8 Working with other Professionals

An important part of Sealladh has been working with the other professionals involved with the participant. In John's case it has been important to link his outdoor mobility training with his physiotherapy, to work with the speech and language therapist to promote better information processing and to discuss the need for adaptations to the home with his occupational therapist.

John

John is lucky to be alive after a stoke in May 2009. He was told he may not walk again or regain the use of his arm. John's wife had noticed that when he was in hospital he wasn't completing his speech and language exercises and discovered that they were being left at the end of his bed and he couldn't see them. Both he and his family felt that nothing was being done about his vision and were very excited to discover that he was eligible for Sealladh.

John felt that as Sealladh was " a forces programme", it would be reliable and of a high standard. He found the light box exercises fascinating and his mission was to do better each time.

> *"I'm like a kid trying to impress, the improvements are obvious and quite quick which gives a bit of a buzz. Laura is extremely respectful and sensitive, her manner and approach are very positive and comfortable. We thought here is someone who is interested, saying you will be able to scan, you will be able to get around again. Very positive messages after the negative ones from the clinicians. I've enjoyed every part of the programme and get huge satisfaction from completing the tasks. "*

John's family feel that he would not be as far through recovery if it hadn't been for Sealladh.

> *"It has been marvellous and such a transformation. He wouldn't be where he is now if he hadn't been involved, pity we didn't find out about it sooner, it has been better than we ever imagined. The improvements are obvious and come quite quickly "*

Currently John is living with his daughters while he is waiting for the work to be completed on his house, which will allow him to return home. A new entrance to the house needs to be constructed; a stair lift and walk in shower are installed. These were identified as part of the environmental audit undertaken at John's house as part of Sealladh and applications have made to SWB for financial support.

9.0 Professionals Perspectives

As part of the evaluation, it was important to get the views and opinions of the project from a range of different professionals. A questionnaire was drafted and circulated to key professionals and /or organisations on the publicity list. In all, 20 questionnaires were sent out and by the deadline of 7th August, 9 replies had been returned. A full analysis of the replies can be found in appendix 4.

9.1 Replies

Most people found out about the project from the project worker either by a presentation or by direct contact, with only one person finding out through a leaflet. Of the replies, 3 were from head injury charities, 3 from local authorities, 2 from military charities, and I from NHS stroke Unit.
One professional identified themselves as working closely with the project, two who are aware of the project but haven't made referrals, with a total of six making referrals.

9.2 Outcomes for Clients / Patients

When the professionals were asked about the outcomes for their clients, they identified the following, rank ordered by frequency. Although from only 9 professionals and therefore not reporting on all of the participants, these results very much reflect the progress recorded by the worker.

Improved ability to use compensatory scanning	7
Increased confidence	7
Increased independence	7
Improved performance on everyday tasks	6
Increased outdoor mobility	6
Less reliance on others	5
Registration as blind or partial sight	5
Additional aids and equipment	5
Improved financial situation	3
Improved housing	2
Return to work	1

Professionals were also asked to describe benefits to patients and again improved confidence, independence, outdoor mobility were frequently quoted. Practical and financial support was also mentioned.

Professionals saw the outcomes for families in terms of increased mobility and independence of their family member but also identified how much the families welcomed the support and help.

One professional identified the importance of the support being available from the hospital setting to the community setting and being available in the person's home. This was a factor mentioned by two of the participants and their families who felt that the continuity of support was a valuable part of the programme.

9.3 Benefits to Referring Organisations

Of the nine responses, eight professionals felt that either they themself or their organisation had benefited from involvement in Sealladh with the following additional comments.

- Good working relationship for the benefit of the patients. OT's tend to be the liaison person with Laura on the ward and can carry on some activities initiated by Sealladh and have commented on the good advice they have received on best approaches with patient.
- The SWB has benefited from receiving applications for entry to the Roll from those veterans who participated in the project.
- Understanding how some visual problems can be helped and improved.
- Laura spent time with our group explaining the process and raising awareness of the conditions. She also raised awareness of Visibility in general.
- Shared learning across specialist services and peer support for complex cases with Visibility and ABI service.
- We now have knowledge of how these sessions with a client works and able to refer to service.
- Increased knowledge and skills in relation to working with people with a visual impairment. Increased resources and experience of working closely with vision specialists.
- Provides added support and services to clients and increases participation in our programme.

9.4 Eligibility Criteria

When asked specifically about the eligibility criteria, eight of the nine professionals felt that the criteria had influenced the number of referrals.

> *"Would refer more if a service history wasn't required as part of access to service. Tend to refer all patients who have visual difficulty following stroke with rehab potential. Patients wait sometime for an ophthalmologist and there is no rehab offered to daily life needs in relation to visual neglect other than what is offered by Physio and OT."*

There was a strong response in favour of opening the eligibility criteria with all nine responses identifying in a variety of ways that they project should be opened out. This theme also arose when asked whether they could identify any limitations to Sealladh:

- Lack of input to those without military service
- Possibly the limited criteria
- Just the limitations of the referral criteria. We meet a lot more people with this type of problem who have not been in the forces.
- Strict eligibility criteria
- The referral criteria very much limited the number and scope of referrals made

9.5 Potential to Develop

There was strong support for the further development of Sealladh. Eight of the nine responding positively and commenting they wished to see this service opened up to all those with a brain injury and visual impairment.

As a final question, people were asked for additional comments. The level of satisfaction and wish to see this service continue was highlighted.

- Hope very much it continues
- It is a very worthwhile project and whenever I have spoken to Laura she has been very approachable and helpful. It would be a great service to continue and loosen up the criteria
- Delighted with service, please find a way to continue and broaden the service

When asked what would happen if a charge was applied to access the service, the lack of resources was frequently quoted as a barrier and a concern that introducing a charge may result in an inequity of service.

10.0 Emerging Themes

10.1 Awareness of Project

Various presentations were conducted throughout Glasgow and the West of Scotland (Appendix 1). The most fruitful in terms of generating referrals was a presentation to a group of 50 orthoptists from all over Scotland. Referrals from organisations supporting military personnel have been unexpectedly low. SSAFFA and the SWB have engaged most with the project with very little interest being generated from the military hospitals or those for ex military.

The most high profile presentation was at the SHIF (Scottish Head Injury Forum) conference in December 2008 generating some very positive interest. It would have been useful if such an opportunity had arisen earlier in the project as it has informed and influenced a wide range of professionals involved with head injured people.

Building an awareness of the project across such a diverse range of organisations is a time consuming task. It required the project to be credible within a hospital based setting, encompassing not only the diversity of neurological, and eye specialities (ophthalmology, optometry, orthoptics) but also the therapeutic specialities of occupational therapy, speech therapy and physio therapy. The project also needed to appeal to the community based services offered by both statutory and voluntary organisations. This is a big task and is made easier when there is a track record of success. For Sealladh, the process took much of the first year and a good deal of the second year to build contacts and credibility. As Sealladh is getting better known across these sectors and there are positive tangible outcomes for both participants and the organisations that refer, the number of referrals is increasing.

10.2 West Dunbartonshire

Even with the high level of awareness of Visibility and direct involvement in the development of the project proposal, referrals from the Acquired Brain Injury Team in West Dunbartonshire, were low. The WDC Brain Injury Team believes that the target community for Sealladh are there, but hidden and if known to services, may be found more often within criminal justice or

addictions services. The WDC professionals directly involved in the project are of the opinion that Sealladh would have benefited from three year funding as opposed to two years, giving more time to build contacts. They also would have liked better integration, for example a seconded post to their team would have allowed much closer working and they feel would have helped to identify ex service personnel within the area.

Brain Injury is a complex area with several intersecting disciplines but is said to be essentially driven by an acute service delivery model. This analysis was described as being the case for wider work of the Brain Injury Team in WDC and it has taken time for them to build referral pathways especially from acute services to community services. In essence there is no single pathway into the Brian Injury Team and in the case of stroke patients; there is seldom a referral as they are supported through other pathways. As far as partnership working with military organisations, brain injury professionals in West Dunbartonshire share the view that engagement with these organisations is difficult.

Taken together, there is little surprise therefore that developing referrals pathways has been an uphill struggle for Sealladh.

10.3 Referral Patterns

When the pattern of referrals is examined, most have arisen from a relationship between the worker and staff based within hospital / acute sector care. For those professionals, the important feature was not only hearing a presentation but to see the project worker with a client in a clinical setting or on the ward and noting the positive impact the project made

The combination of eligibility criteria for referral has acted against Sealladh with many of the organisations commenting that they restricted their ability to refer. A key issue influencing the referral rate, is that previous armed services history seldom arises as a topic within interactions with patients / clients and it was not something that many professionals remembered to ask. There was an acknowledgement that Sealladh would have received many more referrals without the veteran criteria. The current picture is one of a significant number of key professionals aware and very keen to engage with Sealladh, and with patients / clients who would benefit but can not be referred.

10.4 Model of Service Delivery

The programme was based on using neuro vision technology to help people to scan. For participants, their families and professionals the use of the light box and the variety of programmes it can generate, has been a very useful tool in helping them understand what difficulties are present. It also allows progress to be tracked over time. Participants and family have commented that this tangible demonstration of progress is very positive and builds confidence. Personal success brings with it the motivation to achieve and an upward spiral begins. This sits in stark contrast to the negative experiences resulting from the head injury. For many, they experience loss of life as they once knew it. They face many assessments of what they cannot do and where there is some the prospect of a skill returning, it may be on a limited basis.

For Sealladh, NVT technology sits within a wider, holistic context of rehabilitation support for visually impaired people. The value of tailoring a rehabilitation programme to the individual needs of the participants was rated very highly by participants, their families and the professionals. Participants and their families valued the time spent with them to understand and respond to their needs. Each participant is different, their circumstances, personalities, and injuries are unique to them. The task is to tailor the training to the person and look at what works best for them.

NVT has proved itself an important tool for Sealladh but it is one of many rehabilitation tools which has been used. When participants have mastered the scanning technique, they need to be supported to apply what they have learned to their day to day life. It is during this second phase of the rehabilitation programme that the level of enablement that has been achieved becomes apparent. For some people this happens in a period of a few weeks and for others it may take many months.

The feedback from professionals is very positive, not only about the impact of the training on the participants but also on them and their organisations. The West Dunbartonshire Brain Injury Team have been very welcoming and supportive not only of the project but for the project worker. This has been very beneficial in terms of learning the complexities of brain injury and being given an opportunity to reflect and discuss how to adapt rehabilitation strategies to maximise the people’s abilities.

10.5 Why has it worked?

A person centred approach is at the heart of all Visibility services. Throughout the organisation, Visibility works with people to define their own personal goals and tailors its support to help them achieve. This ethos is central to Sealladh. It is hard to separate out the different factors contributing to the success of Sealladh but the focus on and flexibility to tailor the programme to participant's needs and progress is a key feature. There is no doubt that participant's value the involvement and engagement in their lives by a skilled and experienced worker, who comes with credibility from key organisations, and delivers a holistic programme focussed on improving quality of life. But perhaps of even more importance is the message of what can be achieved and tangible demonstration of progress which has inspired and motivated all those involved in Sealladh.

11. Conclusions

In essence, Sealladh is one of the very few projects working in the area of rehabilitation for those experiencing neurological sight loss. Much has been learnt within the pilot and Visibility is now one of a handful of sites where there is knowledge, understanding and experience of what can be put in place to support people to recover.

Sealladh is an intensive programme and it changes lives.

Appendix 1

Organisations Contacted

- Military
  - Combat Stress
  - Headley Court
  - Erskine Hospital
  - SSAFFA
  - Scottish War Blinded
  - St Dunstan's

- Acquired Brain Injury organisations
  - Momentum
  - Headway
  - Richmond Fellowship
  - Scottish Head Injury Forum (SHIFT)
  - Leonard Cheshire ABI Unit
  - ARBD (alcohol related brain damage)

- Local Authority
  - Sensory Impairment Teams
  - Brain Injury teams/ workers

- NHS – relevant departments
  - NHSGGC
    - Southern General Hospital
    - Gartnavel General Hospital
    - Glasgow Royal Infirmary
    - Inverclyde Royal Infirmary
  - NHS Lanarkshire
  - Astley Ainslie, Edinburgh
  - BIRT

- Private Care / NHS
  - Murdostoun Castle

Presentations Given

Orthoptists
A presentation was delivered to fifty orthoptists from all over Scotland at the Royal Alexandria Hospital.

NHS
Tarbet Health centre
Campbeltown Hospital
Inverclyde Stroke Unit

Erskine Hospital: A presentation was given to various managers within Erskine hospital.

SSAFA: A presentation was conducted to the Argyle and Bute Soldier Sailor Air Force and Army (SSAFA) organisation.

The Chest, Heart and Stroke Organisation: Sealladh was invited to present at their annual event which was attended by a diverse mixture of health care professionals.

SHIF Conference
A presentation and workshop was delivered to over 50 health care professionals, family and friends of brain injured people.

Appendix 2

Summary of Participants

ID	Age	LA	Referrer	Date refer	Gap	Sessions	B/PS	A /T	Sight Problem
1	69	Glasgow	SWB	Jul-09	4 -5 yrs	To date 4	PS	T	R Hemianopia
2	73	Glasgow	Visibility	Jul-09	2 days	To date 1	Blind	A	Quadranopia
3	75	Inverclyde	Stroke Unit	Jul-09	3 days	11	NA	A	awaiting result
4	82	Inverclyde	Stroke Unit	Mar-09	3 days	25	PS	A	R Hemianopia + neglect
5	29	Argyll Bute	SWB	Dec-07	3yrs	100	PS	T	L Hemianopia
6	56	Argyll Bute	Self	May-09	6 mths	30	PS	A	L Hemianopia
7	52	Renfrew	WDC BI	Jul-08	10+yrs	18	NA	T	Strabismus
8	56	Dumfries	Visibility	Feb-09	28yrs	10	PS	A	L Hemianopia
9	68	Argyll Bute	SSAFFA	May-08	4 yrs	15	PS	T	L Hemianopia
10	47	Inverclyde	Stroke Unit	Jul-08	3days	3	N/A	A	Diplopia
11	85	Glasgow	Relative	May-08	4 yrs	15	PS	A	L Field loss
12	49	East Dun	Momentum	Dec-07	1 year	15	Blind	T	R Quadranopia
13	41	Glasgow	SWB	Dec-07	4 yrs	30	N/A	T	R Field Difficulties
14	55	Inverclyde	Stroke Unit	Aug-08	3days	25	PS	A	L Hemianopia
15	79	Glasgow	Visibility	Mar-08	6mths	15	Blind	A	Bilateral Hemianopia
16	44	West Dun	WDC BI	Feb-08	6 mths	5	N/A	T	Central Field Loss
17	77	S Lanark	OT	May-08	3yrs	50	Blind	A	R Field Loss

Appendix 3

Sealladh Final Assessment

Name: **Date:**

Outcome	Client	Family	Comments
Improve pen and paper tasks			
Bumping into things less - home			
Better outdoor mobility			
Bigger range of routes			
More confidence			
Less reliance on others			
Improved financial situation			
Adaptations to home			
Additional Equipment			
Registration			
Return to work			

Tell me about you head injury and the impact on you life.

What can you do now that you couldn't do before?

What difference has Sealladh made to you and your family?

What have you enjoyed / not enjoyed about Sealladh ?

Appendix 4

Sealladh Project Evaluation Summary

Collated responses of nine organisations/ professionals who responded

1. Name of your organisation?

   Larkfield Unit NHSGGC
   Scottish War Blinded
   SSAFA
   Headway
   Momentum
   West Dunbartonshire Council
   West Dunbartonshire ABI Service
   Inverclyde Centre for Independent Living
   Quarriers Renfrewshire Head Injury Service

2. Your job/ role within the organisation ?

3. Who are your key client group (s)? Tick as many as required.

   a) People with physical disability 3
   b) People with sight loss 4
   c) People with traumatic brain injury 7
   d) People with acquired brain injury 6
   e) Military personnel 2
   f) Veterans 3
   g) Other? …all of above, families of military personnel

4. What statement best reflects your awareness of Sealladh:

   I work closely with the project 2
   I have made referrals to the project 6
   I am aware of what Sealladh but haven't referred 1

5. Have you made any referrals to Sealladh?

Yes 6 No 3

6. How did you find out about Sealladh?

Leaflet / posters	2
Contact with worker	3
Presentation	4
Through other professionals	1
By word of mouth	1
Direct involvement with project implementation	1

Other, please state…
Sponsoring Organisation.
Laura worked with our group to get some experience of working with people with ABI

7. Sealladh has very specific eligibility criteria, has this influenced your ability to refer?

Yes 8 No 1

Would refer more if a service history wasn't required as part of access to service. Tend to refer all patients who have visual difficulty following stroke with rehab potential. Patients wait sometime for an ophthalmologist and there is no rehab offered to daily life needs in relation to visual neglect other than what is offered by Physio and OT

8. If the eligibility criteria were widened, who do you think the project should be open to?

- Anyone with brain injury and visual impairment
- Anyone with ABI who has problems with visual neglect
- People with ABI, stroke and other neuro conditions
- Anyone suspected of having neurological sight deficit
- Many others could benefit from this tracking system but may not have been in the forces which limits referrals
- Should be based on individual need and assessment across health and social care services rather than based on medical diagnosis
- Many more people who have visual problems
- All who could benefit
- Those suffering visual problems following stroke and who need rehab to regain function in the community i.e personal arena, leisure, work needs.

9. Sealladh has recorded several measureable outcomes. Have you any evidence of these? Please tick as many as necessary.

Improved ability to use compensatory scanning	7
Improved performance on everyday tasks	6
Increased outdoor mobility	6
Increased confidence	7
Increased independence	7
Less reliance on others	5
Registration as blind or partial sight	5
Improved financial situation	3
Improved housing	2
Additional aids and equipment	5
Return to work	1

10. Can you describe how your patient (s) has benefitted from participating in Sealladh?

- Patients report positively about the project and feel supported and assisted by Laura
- Improved confidence / mobility and also financial as involvement in this project led to entry to Roll of SWB and financial support / aids awarded
- Improved confidence, understanding of their specific visual problems. Assistance and support from case worker. Also extra funding for bathroom aids etc
- We don't have any evidence as we are now not in touch with people referred
- Increased their ability to sac/track which has improved their mobility and enabled the return to work
- Confidence and ability has improved clients are now more independent
- More confidence and clarification of injury and limitations

11. What about their family?

- Particularly supported in move from hospital to community and continued input from Laura across this boundary
- They appreciate the independence and confidence this project has given to the individual who has been trained
- Welcomed all the support and help

- Carers have noted increased abilities and have been supported by Sealladh to cope with changes and the increased independence

12. Have you / staff in organisation benefited from involvement in Sealladh?

Yes 8 No

- Yes good working relationship for the benefit of the patients. OT's tend to be the liaison person with Laura on ward. Also can carry on some activities initiated by Laura and have received good advice on approach with patient.
- The SWB has benefited from receiving applications for entry to the Roll from those veterans who participated in the project
- Understanding how some visual problems can be helped and improved
- Laura spent time with our group explaining the process and raising awareness of the conditions. She also raised awareness of Visibility in general
- Shared learning across specialist services and peer support for complex cases with Visibility and ABI service
- We now have knowledge of how these sessions with a client works and able to refer to service
- Increased knowledge and skills in relation to working with people with a visual impairment. Increase resources and experience of working close with vision specialists
- Provides added support and service to clients and increases participation in our programme

13. Have you identified any limitations to Sealladh, if so what ?

- Lack of input to those without military service
- Possibly the limited criteria
- Just the limitations of the referral criteria. We meet a lot more people with this type of problem who have not been in the forces.
- Very strict eligibility criteria
- The referral criteria very much limited the number and scope of referrals made
- Eligibility criteria

14. Would you like to see Sealladh develop?

Yes 8 No

- Yes to include a wider range of people
- Yes to assist anyone to benefit from this training
- I have at least three clients who would benefit from this service but I can't refer
- Expansion of the service to cover our client group and a longer term service set up to compliment vision rehabilitation services
- No one else provides such a service

15. Sealladh was funded as a pilot project. If we needed to charge for the service, what impact would this have on your ability to refer?

- This would have a big impact, due to lack of funding in NHS. Also if patients had to self fund this would discriminate between those who could afford it and those who couldn't
- None
- We are also a charity and our clients are usually on limited incomes so payment is not usually an option
- This would have a significant impact due to expected savings required within council services
- This would need further discussions
- To be honest it would impact greatly as all my clients are on benefits.

- This would have a major impact and costings for each case / sessions would be crucial
- As a charity it would be difficult, costs would need to be reasonable

16. Have you any other comments to add?

- Hope very much it continues
- It is a very worthwhile project and whenever I have spoken to Laura she has been very approachable and helpful. It would be a great service to continue and loosen up the criteria
- Delighted with service, please find a way to continue and broaden the service

References

1. Clarke G. Incidence of neurological vision impairment in patients who suffer from and acquired brain injury. International Congress Series 1282 (2005); 365-369

2. Goodrich G., Kirkby J., Cockerham G., Ingalla SP., Henry L., Lew MD. Visual function in patients of polytrauma rehabilitation center: A descriptive study. Journal of Rehabilitation, Research and Development (2007); 44(7):929-936

3. Wong TY., Seet., Ang CI. Eye injuries in twentieth century warfare: A historical perspective. Surv. Opthalmol. (1997); 41(6):433-459

4. Gianutsos R. Vision rehabilitation following acquired brain injury. In Gentile M, Functional visual behaviour: A therapist's guide to evaluation and treatment options. Bethesda (MD): American Occupational therapy Association; (1997); 267-294

5. Verlander D et al. Assessment of clients with visual spatial disorders: a pilot study. Visual Impairment Research (2000);2(3):129-142