

Regaining Vision Following Brain Injury

1. Introduction

For the past nine years Frank Ainsbury has been doing some exploratory work with people who have been registered blind following a brain injury. He has a Psychology Degree and had subsequently trained as a Rehab worker. The thinking that he brought to the post was "If the brain can re-learn skills then why could it not re-learn the skill of being able to see."

1.2

The work began when a small sample of referrals following registration at BD8 were passed to the Rehab Officer in conjunction with the Service Manager to look at the issues facing people with a brain injury and to try to find other professionals in the field of brain injury and ophthalmology who would be interested in working with us. Searches via the Internet and talking with other local and national agencies highlighted the disturbing fact that ophthalmologists look at vision and brain surgeons look at brains, neither spoke to each other or necessarily understood the issues involved.

1.3

Many of the cases referred through to this rehab worker were people who were registered as blind, in many cases as totally blind and the aim was to visit these patients whilst still in hospital, usually within a brain injury unit. Confidence was gained with the staff who work within the brain injury unit to follow a pattern of training for familiarisation with the patient on a daily basis and also working with family members to reinforce what the patient had re-learned and to develop the exercises further. It would be over simplified but necessary to explain that the exercises are based around re-training the brain, first of all to identify light, then shapes of light followed by distance of obstacles or objects, familiarisation with the environment around the patient e.g. encouraging the patient to find the end of the bed followed by the door of the room etc. It was found in the early stages that patients with such input could identify light, then shapes of light, then objects even though it may be with a restricted visual field. Exercises were then

introduced slowly to encourage the person to gain independence using mobility aids such as a hoople to travel independently and to start to teach the client to gain confidence in movement. Following a contact with an optometrist with a particular interest in designing and producing filter lenses (available for purchase by the public) which would help dyslexic people to read. It was felt that these filters may help people with a visual disability following a brain injury. A working relationship was established with this optometrist and the rehab worker in question and between them, specific filters were designed for each client and with careful introduction of the filters through the glasses and regular daily exercises to help the patient identify obstacles the vision was slowly gained to the point where those using the filters were able to see obstacles at quite a distance and read print. Also people were encouraged to identify and describe television programmes and in one case re-learned to play cricket.

2: Client Profile

Client A identified to LVSB through referral from hospital in Lancaster following a brain injury, which occurred during a cricket match. This client was moved to a neurological unit at Walton hospital and the neuro surgeon who knew of the work being undertaken by LVSB called in our rehab worker. This client was registered as totally blind on a BD8 form, having been seen by an ophthalmologist. The process, as identified earlier was introduced within the hospital and after several weeks the patient could identify light, then shapes then obstacles, moving onto the filter lenses about twelve months on. At the same time regaining confidence in mobility and re-learning life skills at an adjacent rehab centre. The course is supervised by an LVSB rehab worker. Following the introduction of the lenses this client can now read at 6:6 is able to travel independently without the use of the long cane. This client has now signed up for a pre-degree course with Hugh Baird College, Merseyside and has also re-established his relationship with his partner, whom he married earlier this year, they are now expecting twins. This client is still learning and is still undertaking exercises with the rehab worker but is developing more independence as the weeks go by. The work could not have been achieved without the support of family members, the specialists within the hospital and the support workers who have been involved with his gradual return to independence.

Client B: This client was referred to LVSB through the normal process of BD8 registration some 2 years ago. She had many health problems including, kidney dysfunction and had suffered a stroke. The diagnosis on the BD8 was total blindness. A similar pattern was followed to that of client A, introducing light then shapes. Client B, despite her many health problems has followed the programme, being supported by her family and is now able to describe from her chair a full television programme, including the moving pictures, what people are wearing, their expressions etc and is also able to read print. Her mobility development has been slowed down due to her many health problems, however she can walk independently with a Zimmer frame. It is hoped that, health permitting she will be able to complete the rehabilitation programme laid out by the rehab worker and gain a higher degree of independence but she reports that her vision has significantly improved and useful to her.

Client C: this client was registered over 12 years ago and followed the usual rehabilitation process for someone registered blind-following assessment, a rehab programme is carried out at Christopher Grange rehabilitation centre, following which she applied for and obtained a guide dog. Her brain injury followed an accident during an operation; therefore the trauma at her loss of sight was enormous. She functioned for those 12 years as a visually impaired person and was brought to the attention of LVSB's rehab services following support that she gave to a carers support group where she learned about the work undertaken by LVSB and asked whether the lenses, used to develop vision in people with a brain injury would be of use to her. At the beginning of the process she reported being able to see obstacles but not clearly identify them and her description was that she could see in 2 dimensions as opposed to 3dimensionally. Following experiments with different filter lenses and carrying out the visual exercises laid out by the rehab worker this client now functions as a sighted person, able to identify her environment in 3D, walking independently without the use of a dog, utilising print and other visual materials. She has now decided not to re-apply for a further guide dog as she has sufficient confidence in her own sight with the filters to get around independently.

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3.1

The work to which I gave outline above has been duplicated with several other clients seeking support within LVSB with varying success. We have also viewed the progress of those people who are identified as registered blind following a brain injury who we have not been able to work with and one of the early questions asked from us was if no treatment was offered would the sight return of its own accord? These clients prove that without stimulation the sight does not return for them.

3.2

It is therefore necessary to understand more about why this process works and to bring the various specialists within brain injury and ophthalmology together. More research is required in the area of exercise, diet and visual therapy and more needs to be understood about the brain's ability to re-learn lost skills and in some cases to re-heal some of the damage caused.

3.3

To date LVSB has been able to allocate the rehab worker with specialist knowledge in this field the appropriate time to work within this area however this work has to be undertaken at the same time as running a normal rehab workload. It will not be possible to spend the amount of time required as the input of working with someone with a brain injury needs to be regular, 3-4 sessions per week if the information is to be retained by the client. We need to move towards gathering professionals together who will provide a holistic training programme combining their areas of expertise however this will not be possible until we are able to present a more in-depth case for support and this can only be done with further research.

3.4

LVSB is therefore looking for funding to research in the areas of Vision therapy, Filters. Psychotherapy, Exercise, and Diet. As yet this cost is unknown.

The above is a very simplified version of what LVSB has undertaken over the past 8 years, much is yet to be done and we need to ensure that what has been learnt in Liverpool is extended out across the UK and internationally. The only reference to people working in a similar field to LVSB is

Frank can you insert any people/names working in this field

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