

# HELPING MAJOR TRAUMA PATIENTS RETURN TO WORK

## **ACKNOWLEDGEMENT**

**This project was funded and inspired by the Black Stork Charity.**

Social Finance has partnered with the Black Stork Charity, who funded research and development to scope the feasibility of testing an innovative vocational service for trauma care patients. The Black Stork Charity focuses on promoting excellence in rehabilitation services through research, innovation, and best practice. Its first project entailed building the new state-of-the-art rehabilitation centre for the Armed Forces on the Stanford Hall Rehabilitation Estate to replace Headley Court in Surrey. It is now enabling the establishment of the National Rehabilitation Centre (the NRC) on the same site to treat regional NHS patients and provide an academic hub for research, innovation, education, and training.

## EXECUTIVE SUMMARY

At least 20,000 people suffer trauma in England each year. As survival rates rise, effective rehabilitation and community integration post injury are becoming increasingly critical.<sup>1</sup> Returning to work is a key rehabilitation goal for many trauma patients providing economic resources, shaping identity and helping to meet psychosocial needs. Despite this, only half of the individuals suffering trauma return to work quickly and almost 20% do not return to work at all.

Evidence suggests that an early vocational rehabilitation intervention integrated into the overall trauma care and rehabilitation treatment would enable more patients to return to work as well as accelerate their return to work.

We propose setting up a vocational rehabilitation service pilot to support people recovering from trauma back to work. The suggested delivery model would initially entail a two-site, 12-month proof of concept pilot to demonstrate the potential of a vocational rehabilitation service to support people recovering from trauma to make a safe and positive return to work. We would focus on two target cohorts:

1. Individuals who have a job to return to after trauma; and
2. Individuals who would need support in seeking new employment after trauma.

As a country we are doing much better in saving lives, but we still have a long way to go to ensure that the lives that are saved are lives worth living. A vocational rehabilitation service would bridge the gap in current provision between the hospital and return home, providing support to coordinate various services needed for broader rehabilitation with an eye on supporting a return to work.

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<sup>1</sup> (National Audit Office, 2009)

## CONTEXT

### Major trauma rehabilitation is inadequate and inconsistent

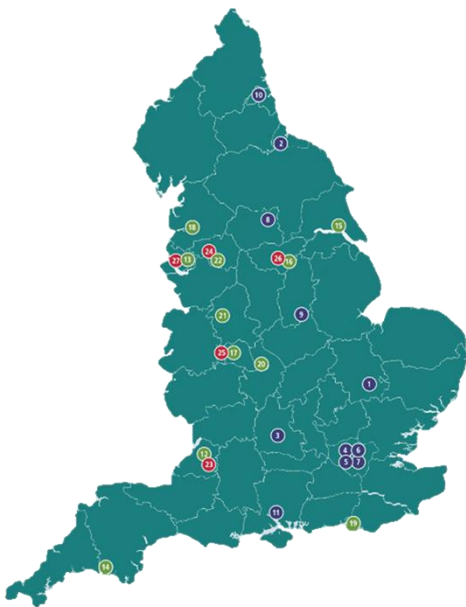
There are approximately 20,000 trauma cases a year in England.<sup>2</sup> Trauma is the main cause of death in people under forty and the main cause of disability.<sup>3</sup> The National Audit Office estimated that major trauma costs the NHS from £0.3 and £0.4 billion a year in terms of immediate treatment costs. Moreover, though subsequent treatment, rehabilitation, carer, and other costs are unknown, the annual lost economic output as a result of major trauma falls between £3.3 billion and £3.7 billion.<sup>4</sup>

Trauma care in England was reorganised in 2012 after the introduction of Major Trauma Centres (Figure 1, 2). Currently 27 Major Trauma Centres exist in England and ten of these centres are designated for adults only. Such trauma care system reorganisation in the UK was associated with the 19% increase in the survival rate for the victims reaching the hospital alive as measured within five years.<sup>5</sup> Thus, the NHS has become dramatically more effective in saving people's lives in the last decade.

While the survival rates have increased dramatically, the rehabilitation of the surviving patients seems to be lagging. For instance, Hannah Farrell, therapy lead for major trauma at Queen Elizabeth Hospital Birmingham, stated that "As a result of improved coordinated medical care and the introduction of major trauma centres, we have complex patients who are surviving and who might not have survived and we are rising to the challenge of meeting their rehabilitation requirements [...] It's probably a bigger challenge than we ever imagined."<sup>6</sup>

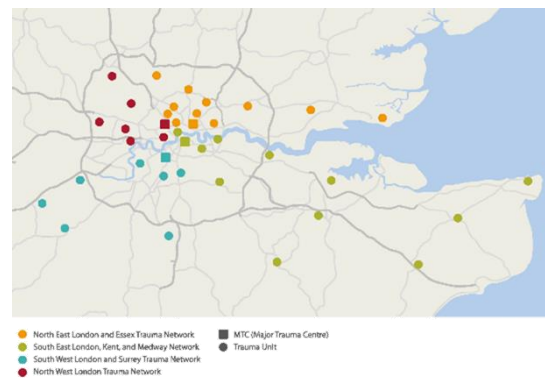
**Figure 1:** Major Trauma Centres in England

Source: NHS England, 2016



**Figure 2:** London Major Trauma Network

Source: Centre for Trauma Sciences



<sup>2</sup> (National Audit Office, 2009)

<sup>3</sup> (NHS Confederation, 2010)

<sup>4</sup> (National Audit Office, 2009)

<sup>5</sup> (Moran et al., 2018)

<sup>6</sup> (Rehab Services: Are They Keeping Pace with Better Responses to Major Trauma? | The Chartered Society of Physiotherapy, n.d.)

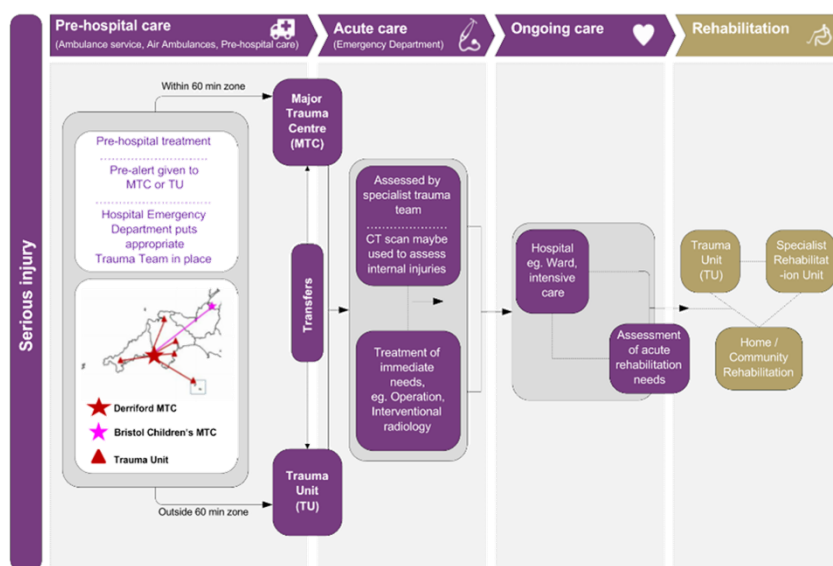
Rehabilitation services still represent a relatively small part of the NHS system. There has been a stable number of approximately 180 rehabilitation consultants throughout the years, while the number of palliative care consultants grew steadily to reach more than 600.<sup>7</sup>

## The importance of returning to work

Evidence from the UK government commissioned independent review shows that employment improves health and well-being and is, therefore, essential to recovery. Employment provides individuals with economic resources to participate in society, helps meet psychosocial needs, and is instrumental in defining identity. In contrast, feelings of worthlessness are associated with poorer health outcomes.<sup>8,9</sup>

**Figure 3:** Typical journey of a seriously injured patient<sup>10</sup>

Source: Peninsula Trauma Network



There is a growing evidence to suggest that access to work is associated with better health and quality of life outcomes. Dame Carol Black's Review "Working for a healthier tomorrow" in 2008 emphasized the growing evidence base that work is good for health and can help reverse the negative effects of prolonged sickness absence. It also reaffirmed the need for attitude change on fitness to work as it is often thought that it is not appropriate for a person to return to work unless they are deemed as fully recovered. In fact, early return to work with appropriate support is possible.<sup>11</sup>

However, only slightly more than half of those who suffer major trauma return to work without delays. Numerous patients experience a delayed and complicated return to work, while 19.7% do not return to

<sup>7</sup> (Royal Colleges of Physicians, n.d.)

<sup>8</sup> (Frank, 2017)

<sup>9</sup> (Baldwin & Brusco, 2011)

<sup>10</sup> (Network, n.d.)

<sup>11</sup> (Carol Black, 2008)

work at all.<sup>12</sup> One study found that one-third of participants had not returned to work 12 months after the injury.<sup>13</sup>

For example, people with long-term neurological conditions who had no access to work or didn't return to work experienced poorer quality of life as well as negative health outcomes such as anxiety and depression.<sup>14</sup> Despite the growing evidence base on the importance of work, vocational rehabilitation provision to patients with long-term neurological conditions in the UK is inconsistent, highly depends on funding in that area, and is not measured in terms of outcomes.<sup>15</sup>

Finally, patients suffering from the most acute trauma seem to fold into more established rehabilitation pathways, compared to patients who are suffering from issues such as musculoskeletal (MSK) injury. Some of the interviewed rehabilitation professionals as part of this project, emphasized that such patients do not fit into the requirements for the health care or social services follow up once discharged and are simply left out of the system without access to required rehabilitation services and community support.

### **Early intervention is critical for improving outcomes**

Evidence suggests that patients experience a faster recovery in functional status after receiving an early intervention compared to usual care.<sup>16</sup> The delayed rehabilitation process may result not only in more negative outcomes for patients but also in inefficient use of resources.<sup>17</sup> Ideally, the rehabilitation would start while the patients are still in intensive care.<sup>18</sup> Critical care, acute medical, and specialist rehabilitation teams need to closely collaborate to create appropriate rehabilitation pathways. After the intensive care treatment, quick access to an acute rehabilitation programme would provide the needed early intervention to ensure a successful treatment catering to physical, cognitive, neuro-behavioural, and musculoskeletal rehabilitation needs. Once discharged, the patients should benefit from community rehabilitation programmes as soon as possible. Some patients would require continuing specialist rehabilitation support.<sup>19</sup>

The NICE guidelines pathway for major trauma specifies that the major trauma centres should work with local rehabilitation services and specialist rehabilitation providers. When the patient is leaving the trauma unit, a rehabilitation prescription is required, reflecting the individual's "physical, functional, vocational, educational, cognitive, psychological, and social rehabilitation needs."<sup>20</sup> However, the application of this in practice seems inconsistent around the country

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<sup>12</sup> (Collie et al., 2019)

<sup>13</sup> (Kendrick et al., 2017)

<sup>14</sup> (Playford et al., 2011a)

<sup>15</sup> (Hayward et al., 2019)

<sup>16</sup> (Bouman et al., 2017)

<sup>17</sup> (Excellence, 2016)

<sup>18</sup> (Phillips et al., 2020)

<sup>19</sup> (Phillips et al., n.d.)

<sup>20</sup> (Frank, 2017)

## Vocational focus is a missing and crucial piece in trauma rehabilitation

Vocational rehabilitation forms an important part of the whole rehabilitation journey and is defined as “any process that enables persons with functional, psychological, developmental, cognitive and emotional impairments to overcome obstacles to accessing maintaining or returning to employment or other useful occupations.”<sup>21</sup> Early vocational intervention helps cut the vicious cycle of short-term sickness absence becoming a long-term sickness leave and ultimately leading to worklessness in some cases.

The British Society of Rehabilitation Medicine published a standard trauma pathway (Figure 4) that includes the requirement for all trauma patients to be assessed for their ability to return to work. The pathway also recognizes that some patients will need specialist vocational rehabilitation.<sup>22</sup>

There is a growing evidence base to suggest that providing early access to vocational rehabilitation services helps achieve better outcomes. In 2018, a new vocational counselling service was evaluated in three Australian spinal cord injury rehabilitation hospitals. In this programme, vocational counselling was delivered by a Vocational Counselling Coordinator, working with the allied health team, medical, and nursing staff at each hospital. The programme was associated with better post-injury employment outcomes.<sup>23</sup> Another study found that specialist vocational rehabilitation intervention enabled more participants to return to work after traumatic brain injury compared to the control group. Further, patients presenting more complex needs experienced more positive results from the intervention than those with less complex injuries.<sup>24</sup>

In support of the research findings on the importance of vocational rehabilitation, the National Institute for Health and Care Excellence included work related outcomes in their quality standards. For instance, the institute recommends that Information about returning to work should be given before discharge.<sup>25</sup> The England and Wales Insurance and Solicitor Rehabilitation Code 2015 also emphasizes the collaborative use of rehabilitation and early intervention in the compensation process, given early access to stepped and stratified rehabilitation meant quicker return to function and restoration.<sup>26</sup>

The Work, Health and Disability Green Paper noted that employees who have access to early intervention and rehabilitation services and take advantage of them experience long-term absences shorter by 16.6% compared to those that do not. The paper also acknowledges that vocational rehabilitation plays a key role in helping people return to work and preventing those people from leaving work permanently due to poor health and disability.<sup>27</sup>

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<sup>21</sup> (Vocational Rehabilitation Association, 2019)

<sup>22</sup> (British Society of Rehabilitation Medicine, 2013)

<sup>23</sup> (Johnston et al., 2020)

<sup>24</sup> (Radford et al., 2013)

<sup>25</sup> (Excellence, 2016)

<sup>26</sup> (Rehab Code - Case Management Society UK, n.d.)

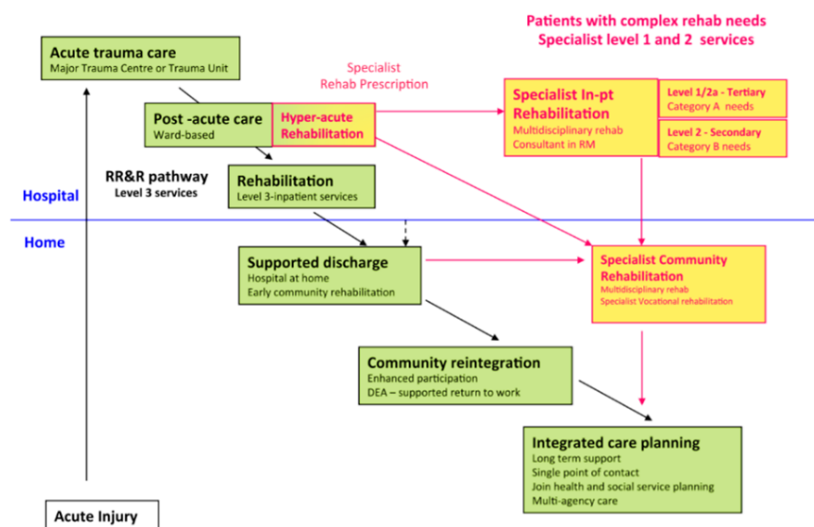
<sup>27</sup> (for Work & of Health, 2016)

## Vocational rehabilitation should be provided early by a vocational professional embedded within the care team

Vocational rehabilitation is most effective when provided as an integral part of the overall rehabilitation programme following a traumatic injury. Vocational rehabilitation professionals are the best equipped to provide the vocational rehabilitation support as they have a unique understanding of the intersection between health and work. Return to work should be maintained as one of the health outcomes of the rehabilitation programme and this needs to be integrated in the overall programme as early as possible.<sup>28</sup> Early intervention is key as the longer patients stay out of work, the more difficult it is for them to reintegrate later.<sup>29</sup>

**Figure 4:** BSRM Pathway for patients with trauma<sup>30</sup>

Source: British Society of Rehabilitation Medicine, 2013



Vocational rehabilitation is best provided as part of multidisciplinary team, for example, a hub having multiple specialists working together.<sup>31,32</sup> Evidence suggests that such rehabilitation intervention helped patients return to work earlier while improving their physical, social, and emotional functioning and wellbeing.<sup>33</sup> Vocational multidisciplinary rehabilitation programme for patients on long-term sick leave significantly improved their work ability compared to the usual treatment.<sup>34</sup> The most effective interventions are tailored to patients needs and are designed with active participation of the patients.<sup>35</sup>

The rehabilitation treatment alone has limited impact on work outcomes. Evidence suggests that work focused rehabilitation combined with accommodating employers are necessary. The success of the overall intervention is largely dependent on the effective coordination of the patients, healthcare and employers.<sup>36</sup> The vocational rehabilitation professional is a key link among all these stakeholders. The coordination between rehabilitation care providers and employers is necessary to produce effective

<sup>28</sup> (Frank, 2018)

<sup>29</sup> (Belin et al., 2016)

<sup>30</sup> (British Society of Rehabilitation Medicine, 2013)

<sup>31</sup> (Tindle et al., 2020)

<sup>32</sup> (Playford et al., 2011b)

<sup>33</sup> (Kärrholm et al., 2006)

<sup>34</sup> (Braathen et al., 2007)

<sup>35</sup> (Belin et al., 2016)

<sup>36</sup> (Waddell et al., 2006)



recovery and returning to work plans.<sup>37</sup> For example, to ensure job retention patients returning to work after traumatic brain injury may need one to two years to ensure they can manage their work on a more sustainable level, and they need support to get there.<sup>38</sup>

A 'stepped-care approach' entails offering low-cost and low-intensity interventions for most sick workers while providing progressively more intensive interventions for the smaller population that needs more intensive and targeted support. Such approach helps to effectively allocate limited resources and tailor to the intensity of individual needs.<sup>39</sup>

## Existing models of vocational rehabilitation

According to some of the interviewed rehabilitation professionals, vocational rehabilitation is widely absent throughout the system and therapists need training on vocational rehabilitation. Currently many patients are discharged from trauma care with limited or no local specialist follow up as there is a lack of available rehabilitation case management and co-ordinating services in the NHS outside of the trauma centre network. This has led to the development of private rehabilitation services funded by the insurance sector for those patients with a compensable injury.<sup>40</sup> It is also worth noting that there have been attempts to introduce a mixed model catering to both public and private patients such as Major Trauma Partnership (Case study 1).

### **Case Study 1:** Major Trauma Partnership – a mixed model of providing support to public and private patients

The Major Trauma Signposting Partnership was created by Cardinal Management, an independent organisation, and piloted at St George's University Hospitals NHS Foundation Trust in 2016. It is now active in 5 different trauma hospitals (St Georges London, Kings College London, Manchester Adult, Cambridge and Brighton), with the aim to extend to one further trauma centre and delayed due to covid-19 impact (Oxford). The intervention provided through this partnership is introduced to the patient in the acute setting by the trauma nurse. The service has a Rehabilitation Advisor from an allied health background visit the patient in the acute setting and work with the local Citizens Advice and provide patients support on a variety of issues from benefit payments, legal advice, transportation and links to some local employment services if needed, among others (Figure 6). The Rehabilitation Advisors are Allied Health Professionals and are employed by Cardinal Management and the NHS. The objective of this new service was to provide patients information, advice and guidance and signposting to help support the patient with immediate non-medical issue and provide some information and signposting for support when they are discharged home.

In the UK, 3 groups of vocational rehabilitation professionals have formed: British Association of Brain Injury Case Managers (BABICM), Case Management Society of the UK (CMSUK), and the Vocational

<sup>37</sup> (Belin et al., 2016)

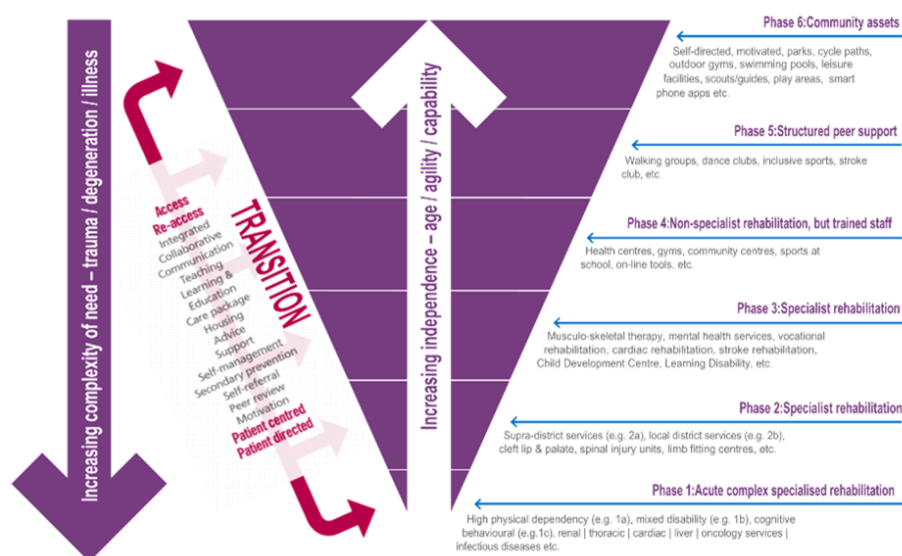
<sup>38</sup> (Watkin et al., 2020)

<sup>39</sup> (Waddell et al., 2006)

<sup>40</sup> (Frank, 2018)

Rehabilitation Association (VRA). The International Underwriting Association and the Association of British Insurers commissioned numerous bodily injury studies focusing on the UK as well as encouraged the development of the rehabilitation code to encourage the use of early rehabilitation by insurers and personal injury lawyers. Under this insurer funded system, patients gain access to a rehabilitation case manager from the acute phase who helps coordinate and plan services and interventions which are aligned with patient broader rehabilitation goals; such as around maximising function and independence and where relevant a focus on an eventual return to work. The insurer pays for services or interventions on a need's basis and often this need is highlighted because the NHS or social care cannot offer the service or intervention, or the waiting list to access is more than 4 weeks.

**Figure 5: NHS England Model for Rehabilitation Services<sup>41</sup>**  
*Source: NHS England, 2016*



Although NHS England mentions the importance of vocational rehabilitation in their 2016 commissioning guidance (Figure 5), most clinical commissioning groups report that none of their services were commissioned considering vocational needs of their patients. Musculoskeletal physiotherapy is the most commissioned community-based rehabilitation service. In fact, the service adaptation to patients of working age was limited by flexibility of access and the efficiency of referral process and not by the type of service provided.<sup>42</sup>

Some occupational health professionals have reported delays and even resistance when contacting GPs who did not see the occupational health as a priority. In fact, the Work and Health Unit report found that “traditionally the NHS focus was primarily on treating conditions and symptoms, rather than on what the intervention allows the individual to do, which has left a legacy of work outcomes not always being considered in care provision.”<sup>43</sup>

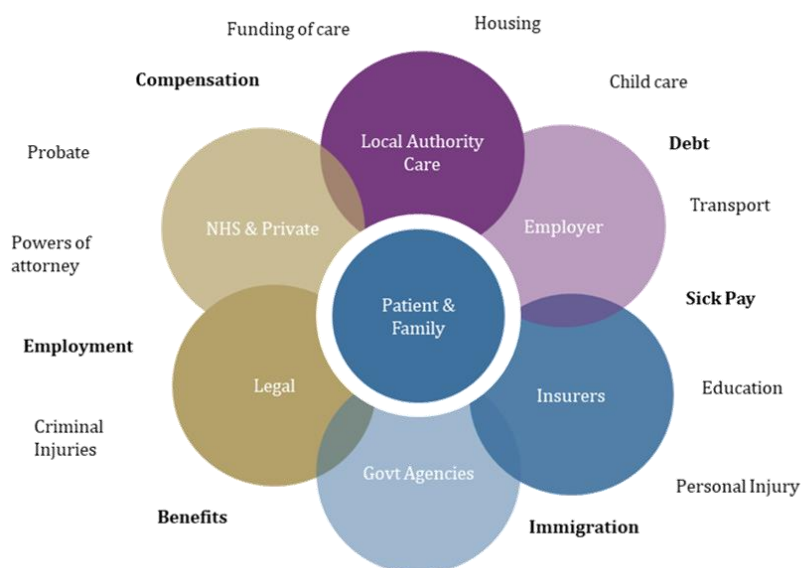
National Institute for Health Research is currently funding ROWTATE, a research study focused on developing a return-to-work programme for people with major injuries.<sup>44</sup> The study is running from

<sup>41</sup> (NHS England, 2016)  
<sup>42</sup> (Tindle et al., 2020)  
<sup>43</sup> (Tindle et al., 2020)  
<sup>44</sup> Read more on ROWTATE [here](#).

2019 to 2024 and will test if such a programme is effective and scalable within the NHS as well as if it saves the NHS money. The research consists of five elements such as creating the vocational rehabilitation package, testing the feasibility and acceptance of the package, testing if the package helps people return to work via a randomised control trial phase, improves their wellbeing and provides value for money, and ensuring if it is appropriate to be scaled within the NHS system. The proposed model will be trialled in 5 major trauma centres (Nottingham, Bristol, Cambridge, Leeds, London) and have a key co-ordinating occupational therapist who ‘case manages’ and co-ordinates the rehabilitation of the patient through the health system and back home into the community. The aim is to provide specialist occupational therapy intervention when needed and coordinate and organise other rehabilitation or services as needed. The occupational therapist will have access to a treating psychologist and measures of patient mental health status will occur at different times throughout the patient journey to determine if a referral is needed for psychological input.

**Figure 6: Patients’ challenges identified by the Major Trauma Partnership<sup>45</sup>**

Source: Major Trauma Partnership - Cardinal Management



This service also tries to smooth the patient’s transition from trauma hospitals back to local hospitals or home. When the patients are being discharged, they ideally transition their cases to local care navigators.<sup>46</sup> The service is funded through a law firm panel at each hospital in partnership with Citizens Advice. Some people benefiting from this service do have a personal injury claim and their involvement and referral to one of the solicitor panel allows the model to also support public patients with no pending legal claim. Patients that do need legal advice get referred to the solicitors’ panel and the solicitors in turn refer them to a case management provider for specialist insurer funded case management and rehabilitation. The model does not provide support to the patient once discharged home, however, does attempt to follow up on the patient status at 12 months post discharge via a survey.

Despite the existence of trauma rehabilitation models mentioned above, the vocational rehabilitation elements within those models are nascent, and a vocational rehabilitation model that provides a

<sup>45</sup> (Major Trauma Partnership – Cardinal Management, n.d.)

<sup>46</sup> [Read more on Care Navigators](#)

consistent follow up to individuals after they have been discharged home from a trauma centre does not exist yet. For example, the NHS standard support ensures patient discharge planning while the individual is leaving the hospital and uses a Rehabilitation Prescription which relies on the individual and their local GP to organise and co-ordinate.

In the mixed trauma rehabilitation model, reflected in the Major Trauma Partnership, the individual may receive support on issues such as financial advice and housing and benefit from detailed discharge planning but receives no follow up at the community level after leaving the trauma centre. Finally, while the ROWTATE study may provide invaluable findings on the feasibility of scaling a large vocational rehabilitation programme across the NHS system, the preliminary findings will only be available in 2024 at the earliest. Meanwhile, there is a significant gap in supporting people suffering from trauma to return to work and, thus, running a smaller scale vocational rehabilitation pilot could provide rapid feedback on return to work and wellbeing outcomes as well as preliminary costs of such services. We outline our proposed approach for testing a vocational rehabilitation pilot in the following section.

## OUR PROPOSED SOLUTION

### **Vocational rehabilitation at the right place, at the right time**

Vocational rehabilitation support provided by a vocational rehabilitation specialist should be provided as part of early intervention and included in general rehabilitation. The intervention would include very early positive conversations about returning to work with the patient and their family, while the individual is still at the trauma hospital. Furthermore, the model would also promote return to work as a key health outcome with hospital clinical staff. The vocational professional would coordinate the individual's interactions with various stakeholders including health professionals, employers, and community support groups. Once the individual is discharged, the support would be provided through remote case management via phone, conferencing platform or email.

Focusing on individuals suffering from major trauma MSK is the initial suggested focus area due to the lack of consistent rehabilitation services offered. Additionally, we identified two different populations who would benefit from different types of vocational rehabilitation:

1. Job retention: individuals who already had a job before the trauma and need help in managing a safe and effective return to work
2. Job seekers: individuals who do not have a job to return to after the trauma and need help to identify, seek, and gain work

The proposed model would embed employment advisers into acute or major trauma rehabilitation settings to deliver stepped vocational rehabilitation interventions according to patient needs:

1. All patients would be assessed and asked about their employment status and interests and receive information, advice, guidance and signposting before discharge;
2. People with concerns about managing work and their injury recovery would be provided with advice and resources to support self-management via phone or email;
3. People with more complex needs would be offered an intensive vocational rehabilitation service including specialist support when trying to return to work.

In this model, the support would be provided by a dedicated vocational professional who would accompany the individual on the recovery and return to work journey from the initial stay at the hospital to linking to local community services to securing employment. The vocational professional would work with the patient to assess individual needs and create a return to work plan. This would be independent from the rehabilitation prescription<sup>47</sup> often used in trauma rehabilitation and would be

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<sup>47</sup> [Read more on Rehabilitation Prescription](#)

specifically focused on vocational rehabilitation. The vocational professional would provide tailored information to each individual and their family depending on need to enable self-management and empower the individual to leverage resources available to enable effective recovery. For example, such professional could help the individual in coordinating with their employer to secure sick leave, arrange sick benefit payments, and provide emotional support along the way. This type of vocational rehabilitation intervention should be integrated into trauma treatment and rehabilitation pathway with the case manager becoming a part of rehabilitation team to ensure effective coordination of rehabilitation services.

We propose a pilot to test this model. The pilot would require:

- two major trauma care centres or major trauma rehabilitation centres to host and embed this vocational rehabilitation model;
- funding per trauma centre for two vocational case managers, programme management, governance of the service, quality assurance and evaluation;
- a 16-month period with 2-month mobilisation, 12-month delivery, and 1-month step down and evaluation phases.

The proof of concept would aim to work with 150-200 people to support either job entry or an accelerated return-to-work. This would be a first step towards developing a model for vocational rehabilitation for trauma patients that could be scaled and replicated, potentially through combined NHS and DWP funding. This approach has been used effectively to scale employment support within NHS mental health teams using the evidence-based Individual Placement and Support (IPS) methodology.

## **COST-BENEFIT CASE FOR VOCATIONAL REHABILITATION INTERVENTION**

### **Selected cost-benefit cases in the UK and globally**

The cost of sickness absence to the UK economy is £10 billion a year.<sup>48</sup> Dame Carol Black's review in 2008 found that the economic costs of sickness absence and worklessness associated with working age ill-health exceed £100 billion a year. Effective work-related interventions could yield higher tax revenues, increased productivity of people at work, and reduced benefit claims and costs to the NHS.<sup>49</sup> Lord Freud's 2007 report estimated the value to the treasury of getting a person off the Incapacity Benefit and into work at £9,000 annually, including both direct and indirect costs.<sup>50</sup>

There is growing evidence to suggest that early rehabilitation yields savings for the public. The DWP's Pathways to work programme was estimated to increase the return to work rate of new benefit claimants by 7-9% and had a positive cost-benefit ratio, though the programme worked better for claimants with musculoskeletal conditions and less effective for those with mental health conditions.<sup>51</sup>

Another study evaluating early intervention for the patients suffering Chronic Disabling Occupational Musculoskeletal Disorders showed savings of up to 64% in medical costs and up to 80% in disability benefits and productivity losses due to avoiding delays in recovery by providing early interdisciplinary rehabilitation between 4- and 8-months post-injury. The study found that early rehabilitation generated approximate cost savings of up to 72% - almost \$170,000 per claim.<sup>52</sup>

A tertiary intervention focusing on manual workers with chronic lower back pain in a water utility company in the UK proved to be effective showing improved psychological status, working capability, and perception of pain while reducing sickness absence, ill-health retirements, and related compensation claims. Sickness absence was assumed to cost £115 a day with the mean cost per employee for sickness absence in the 24 months pre-programme at £1,988. This cost reduced to £618 at 24 months post-programme. Assuming the absence would continue or even increase and accounting for the average cost of the intervention per participant at £917, there seemed to be a significant saving for a company.<sup>53</sup>

Rolls Royce saved approximately £11 million decreasing sickness absence through early intervention in work rehabilitation and sickness absence management system. Everyone off work for more than four weeks was provided with a return to work action plan by their line managers as well as occupational health support and access to in-house physiotherapy.<sup>54</sup>

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<sup>48</sup> (RNIB, 2011)

<sup>49</sup> (Carol Black, 2008)

<sup>50</sup> (RNIB, 2011)

<sup>51</sup> (Waddell et al., 2006)

<sup>52</sup> (Theodore et al., 2015)

<sup>53</sup> (Nicola Hunter, 2006)

<sup>54</sup> (RNIB, 2011)

Royal Mail introduced a strategy to better manage musculoskeletal diseases, the key cause of sickness absence. The intervention based on a psycho-social model resulted in 70% of affected staff coming back to their normal duties with an estimated return on investment of £2.50 for every £1 invested.<sup>55</sup>

Finally, international studies on general rehabilitation and vocational rehabilitation also show a positive cost-benefit ratio. For example, rehabilitation intervention for people with stroke, heart failure or chronic pain in the Netherlands was estimated to have an average cost benefit ratio of over 4 to 1.<sup>56</sup> A study on vocational rehabilitation services for people with multiple sclerosis (MS) in the US estimated the associated return on investment to be approximately 8 to 1.<sup>57</sup>

The challenge of any costs benefit study on the value of rehabilitation is that often the savings as such do not fall into the health or social care system. The savings are shown from greater productivity of the individual and eventual earnings and payment of tax. Some studies do allude to less use of health and social care systems by the individual thanks to early and targeted rehabilitation although the links do not provide direct savings into a strained health and social care budget.

## **Funding the pilot**

While private hospitals can recover all the money from insurers after a successful injury claim, the NHS's ability to recoup the money is capped. Best Practice Tariff funds the additional services provided by the Major Trauma Networks.<sup>58</sup> Through its NHS Injury Costs Recovery (ICR) scheme, the NHS collected £199,988,161<sup>59</sup> in April 2019 to March 2020 compared to the total estimated cost of trauma care of £300 - £400 million a year.<sup>60</sup> Considering the potential savings to the health system and the overall public when timely rehabilitation is provided, it is in the NHS's interest to prioritise funding rehabilitation. However, meanwhile, our proposed solution would benefit from immediate funding of a smaller scale pilot to ensure that it can then be refined and scaled within the wider system.

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<sup>55</sup> (RNIB, 2011)

<sup>56</sup> (Donal McAnaney, 2016)

<sup>57</sup> (Tomba et al., 2008)

<sup>58</sup> (NHS Confederation, 2010)

<sup>59</sup> (Department of Health and Social Care, 2020)

<sup>60</sup> (National Audit Office, 2009)



## CONCLUSION

The NHS has become increasingly better at saving people's lives after they experience trauma. However, this should be accompanied by the growth in rehabilitation and community integration services. A growing evidence base suggests that returning to work is crucial in enabling people's recovery and improving wellbeing by providing economic resources to fully participate in society, enabling connecting with others and helping define one's identity. However, after suffering trauma, only half of the individuals return to work quickly, while almost 20% drop out of the workforce altogether.

In this paper we argued that an early vocational rehabilitation intervention embedded into the overall trauma care and rehabilitation treatment would enable individuals who suffered from trauma to achieve better outcomes in terms of returning to work. Research and discussions with stakeholders indicate that there are generally well-established rehabilitation pathways for spinal, stroke and TBI trauma and inconsistent pathways for MSK trauma. A vocational rehabilitation service pilot, operating at two sites over 12 months, would help demonstrate the positive value of a vocational rehabilitation service to support people recovering from MSK trauma. In this model, a vocational professional would be integrated in the trauma care and rehabilitation team and would be a key link helping coordinate the individual's interactions with health professionals, employers, and community support groups. Such intervention could then be scaled within the broader system in collaboration with the NHS and the DWP.

Although there is a lack of studies assessing the cost-benefit ratio of vocational rehabilitation interventions targeted at trauma patients specifically, we have reviewed numerous relevant studies of rehabilitation and vocational interventions. The review suggests that we could expect the return on investment to range anywhere from £2.5 saved to £1 invested to £8 saved to £1 invested. Thus, a vocational rehabilitation intervention provided at the right place and at the right time would enable people to return to work and lead more fulfilling lives as well as generate significant public savings.

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