Intrinsic motivation

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ABSTRACT

The prevailing wisdom in neurological rehabilitation, and particularly for stroke, is that physical therapies are the key to improvements in function. Despite accepting the importance of 'the motivated patient', the lack of simple, proven ways to improve intrinsic motivation has hindered efforts to combine physical therapies with motivation. Now there is available a simple, free, well-validated approach to encourage intrinsic motivation ('Take Charge'). The benefits for people who had a stroke are well-established but this could be applied to people with a range of neurological and other disorders. We provide the evidential support for this approach and suggest ways of incorporating it into daily practice.

INTRODUCTION

You do not get many hits when you type 'motivation' into the search box of *Practical Neurology*, yet in our opinion, this is the most underused therapeutic intervention available to a neurologist.

This brief exposition of how a neurologist (or neurology specialist nurse or therapist or other health professional) might use this intervention is built on evidence of its effectiveness from randomised controlled trials (RCTs) of people after stroke and of people with chronic obstructive pulmonary disease (COPD), as well as solid experimental evidence from the fields of education and psychology.

The basic premise is that we must make two changes. First, to shift our mindset from one that is disease centred—after all, that is what we are trained to be good at—to one that is person centred. And second, we must move from a situation where we are largely in control of the health professional/patient interaction to one where the patient is allowed to take charge as much as they wish.[1]

Intrinsic versus extrinsic motivation

A simple but well-validated view of motivation is that it has two distinct parts: 'intrinsic' motivation where the person is motivated by themselves and 'extrinsic' motivation where a person is motivated by external factors—working for a financial or other material reward or simply wanting to please parents, teachers, doctors, therapists.[2] Most 'encouragement' is external, especially when there is a judgement involved: 'You've done so well!' Yet the only judgement of progress that matters is that of the person with the problem, not ours. Experimental studies in education and psychology have shown improved outcomes for people intrinsically motivated but worse outcomes (than non-motivated people) for people exposed to extrinsic motivators.[3] For rehabilitation, this can be summed up in the statement, 'What people do for themselves (because they choose to) is more powerful than anything health professionals do to them'. Which all sounds very 'touchy-feely' and politically correct. But is there evidence that this approach is effective?

Promoting intrinsic motivation is effective

The 'Take Charge' intervention, designed to enhance intrinsic motivation, has convincing evidence for its effectiveness in 4 RCTs, 3 for people after stroke (total 572 participants[4]) and 1 smaller study (n=56[5]) for people hospitalised after an acute exacerbation of COPD. Table 1 summarises the evidence. People discharged to community living after stroke, who had received either one or two 'Take Charge sessions' started 2–16 weeks after their stroke (alongside standard care including community rehabilitation where appropriate) had significantly better outcomes 12 months after their stroke, for independence, health-related quality of life and advanced activities of daily living than people who had standard care plus a simple educational intervention. The size of the effect was large: between 4% and 12% absolute improvement in health-related quality of life (greater than the minimal clinically important difference) and independence (modified Rankin Score 0–2). The number needed to treat (NNT) was only 8 for 1

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Table 1 Take Charge evidence and resources

Title	Type	Description	Reference
Māori and Pacific stroke study	RCT	N=172. Māori and Pacific people who had a stroke in New Zealand, discharged to community living 2–16 weeks after stroke. In addition to usual rehab, one Take Charge session versus none. Better outcomes at 12 months for independence, health-related quality of life and carer strain	14
Taking Charge after stroke (TaCAS) study	RCT	N=400. Predominantly European New Zealanders discharged to community living, 2–16 weeks after stroke. In addition to usual rehab, one or two Take Charge sessions versus none. Better outcomes at 12 months for independence, health-related quality of life and advanced activities of daily living. Two sessions better than one. Meta-analysis (N=572): NNT for one extra person independent (mRS 0–2) at 12 months=8.	4
Economic analysis of TaCAS study	Economic analysis of RCT	Healthcare and non-health costs from randomisation until 12 months after stroke. Cost-saving of £1000 per person treated with Take Charge—lower costs for rehabilitation, institutional care and hospital readmission. Cost per QALY saved=(–) £25 000. Cost-effective—>99% probability at (extremely low) willingness-to-pay threshold of £4000/QALY saved.	19
Taking Charge after COPD study	Feasibility RCT	N=56. People discharged after acute exacerbation of chronic obstructive pulmonary disease (COPD). In addition to usual care, one Take Charge session 2–4 weeks after discharge. At 12 months, those randomised to Take Charge had significantly better scores for COPD health status (absolute 20% change). Limited final follow-up through death and ill health.	5
World Stroke Organisation webinar	Webinar	April 2021. A useful introduction. A 35 min presentation and questions explaining Take Charge. Slide set also available.	7
Sam's Gift	Short novel	A fictionalised account of one person's life after stroke, transformed by Take Charge. Aimed at people who have had a stroke and their families. Free pdf and epub versions available from Take Charge website.	20
Workbooks and manuals	Pdf downloads	For stroke and non-stroke conditions with stroke version in six languages currently (more underway). The clinic versions described in the article are also here. Free to download. Word version of stroke workbooks for editing as desired.	8

mRS, modified Rankin Scale; NNT, number needed to treat; QALY, quality-adjusted life year; RCT, randomised controlled trial.

extra person to be independent at 12 months, and so is similar to the NNT of 10 for intravenous thrombolysis within 3 hours of acute stroke.[6] Two sessions were more effective than one.[4] In the COPD study, there was significantly improved health status (20% absolute difference measured by the Clinical COPD Questionnaire) in the intervention group 12 months after the intervention and trends to having less anxiety and better quality of life.[5]

Take Charge

Take Charge, as used in the clinical trials, is a simple intervention involving a trained facilitator (a single 3-hour training session face to face or virtual) talking with the person who had a stroke or other condition in their own home working through a short booklet over 45–60 min. Take Charge aims to encourage intrinsic motivation—the person motivating themselves—through encouraging the person to consider themselves as a unique human, not defined by their medical condition, and helping them to identify and strengthen their purpose in life.[7] Central to the training of the facilitators and delivery of the intervention, the facilitator does not act as a motivator/coach/counsellor/teacher but aims to get the person to do all the talking and idea generation and acts simply to reflect those ideas. This is straightforward to learn, and the principles can be easily applied on a ward round or in the clinic. The booklet is available free to download in six languages with separate versions for stroke and non-stroke conditions.[8] Take Charge is not the only way to encourage intrinsic motivation (see, for example, Dekker *et al*[9]) but, to our knowledge, it is the only intrinsic motivation tool so far tested in healthcare RCTs, and shown to be effective.

There are four ways to encourage intrinsic motivation in daily practice.

1. Provide two sessions of Take Charge in addition to usual community rehabilitation for all people discharged to community living after acute admission for stroke at your hospital. For people discharged home after a stroke, this is the only intervention shown to improve independence in moderate-to-large-sized RCTs. For a hospital admitting 1000 patients who had an acute stroke per year, about half are eligible for Take Charge (alive, not discharged to residential care, not 'fully recovered', reasonable language and cognition). For those 500 patients treated with Take Charge, an extra 62 (NNT=8) will be independent at 12 months after stroke.[4] By comparison, for the same original 1000 stroke patients, at most 100 will receive mechanical thrombectomy; thus with an NNT of 3–4 for independence (modified Rankin Score 0–2) at 3 months in newer trials, an extra 25–33 will be independent.[10 11]
2. Use Take Charge for people discharged with conditions other than stroke, as this intervention is not stroke spe-

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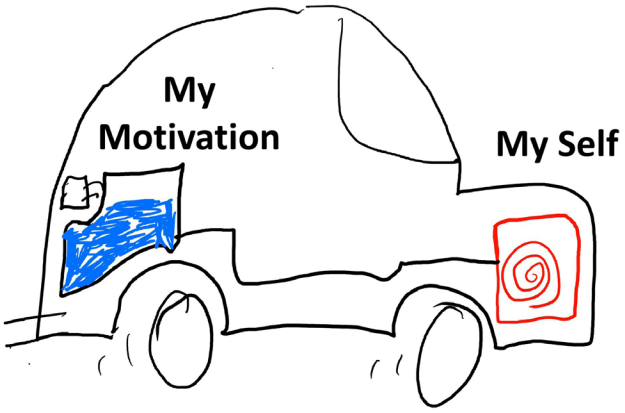


Figure 1 Simple view of intrinsic motivation and sense of self. Image created by HM.

cific. RCTs are underway for people with early dementia and long COVID. It would be entirely reasonable—given its low cost, absence of harm and evidence for both stroke and COPD—to use Take Charge for people discharged from hospital with other conditions: traumatic brain injury, multiple sclerosis (exacerbations or new diagnosis), Parkinson's disease, motor neurone disease and others.

3. Use an intrinsic motivation approach on (stroke) ward rounds, while acknowledging that many neurologists may do something like this already. From the first contact, take as much interest as possible in who they are as a person. 'What is/was your job?', 'What is your favourite thing?' are helpful hooks to remember them by and signal to the patient and family that they are not 'just another stroke'. Unless the situation is clearly heading towards death, it is always possible to offer hope. This may be the major reason why stroke unit care had better outcomes than care on general medical wards in the stroke unit trials.[12] 'Most people improve after a stroke, however bad' is correct and sometimes surprising news to patients and families. Once the early 'medical' period is over, and especially when a family member is present, we share the following message, emphasising the important components of intrinsic motivation—purpose, autonomy, mastery and connectedness. Something like, 'however severe the stroke, there are three key things that contribute to unexpectedly good outcomes: the first is a dream—something big, where you want to be in 12 months' time, hold on to it (*purpose*); the second is an attitude—be stubborn, do not let doctors, nurses or therapists make decisions for you—you are the boss and you can do this (*autonomy and mastery*); the third is a support person—someone in your corner to help you through the tough times, a spouse, family member or friend (*connectedness*). If you've got two or all three (at which point the family member often chimes in 'he's stubborn all right' or 'I won't let her down') anything is possible'. You could also give them the first three pages of the Take Charge booklet to work on while they are on the ward.[8] After all, studies have shown just how lonely, isolated and idle most people are on a stroke ward or stroke rehabilitation ward.[13] Figure 1 can help explain the idea. 'Stroke (and many other conditions) is like a car crash and can affect the bodywork, tyres, windscreen, suspension of your car and therapy and time can improve them (or not). But and more important for your overall outcome is that the engine (who you really are as a person) is working and that you have a full tank of fuel (your own motivation, not someone else's) so that you are going in the direction that you want and that you are motivated yourself to get there' (see also World Stroke Organisation[7]). Figure 2 is a more detailed visual treatment of the same idea, breaking down 'intrinsic motivation' into its component parts of *autonomy* ('It is up to me'), *mastery* ('I can do it'),



Figure 2 My goals, my way: components and overview of the Take Charge intervention. Image credit: Dr Ciléin Kearns, www.artibiotics.com (with permission).

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purpose ('I know where I want to go') and *connectedness* ('Who can I rely on for support?').[2]

4. Use intrinsic motivation in your clinic. Clinics are often busy and time is limited, and the temptation can be to 'get to the business'—the disease process in question. If the first or second question to the patient in the clinic is, 'How is your walking/tremor/headache/foot pain?', the message to the patient is that you are interested only in the disease, not the person. 'What's been happening (since we last met)?' is more open, acknowledges them as a unique individual and allows the person to tell you about a new grandchild, holiday, other event. Even if they respond with 'My tremor/headaches/walking is better/worse/much the same', you can say 'We'll get to that shortly. I was really interested in what you have been up to'. This might use up a minute or so but can contribute to a very different dynamic and surprising information at times. Before talking about a treatment plan, the simple question, 'What are your biggest priorities (for the future)?' keeps the power balance better than 'I think we should …'. If you are planning to see the patient again, and even if you are not, giving them the first three pages of the Take Charge booklet to fill in and bring back next time, or just to keep, gives patients a simple framework to explore what and who is most important to them.

Complicated or simple?

A reasonable criticism of this article is that we are often oversimplifying very complicated situations, involving neurological deficits, both physical and non-physical (such as apathy and fatigue), mood disorders, grief, loneliness and fractured social networks. Should we offer psychological interventions only to people 'ready to engage' or otherwise deemed to be appropriate by the clinical team? Could we be doing harm by letting people set 'unrealistic' goals for themselves? Two large RCTs confirm no demonstrable harm from providing Take Charge.[4 14] Our advice is not to discriminate and to provide Take Charge or tools like it to as many people as possible, encouraging people to 'think big'. Secondary outcome measures from the Taking Charge after stroke study shows that it is not possible to predict 'responders' based on baseline health status, mood or score on an 'intrinsic motivation' measure.[15] Resilience comes from overcoming failure, and we all fail, often. In our opinion, supported by others,[16] so-called 'specific, measurable, achievable, realistic, timed' goals—applied almost universally in current rehabilitation practice—aim too low and probably contribute to poorer outcomes for some patients.

Next steps

Our attempts to encourage UK and other stroke rehabilitation teams and the UK Stroke Association to use Take Charge have often led to responses taking the form of, 'We do this already', to which our answer would be 'No you (probably) don't',[17]; or 'This will interfere with 'proper' rehab' (answer 'No it doesn't'[4 5 14]); and 'From New Zealand?' (answer '??'[18]). We can provide fuller responses on request. There is much ongoing research using Take Charge for different conditions, on different platforms (including telemedicine and online applications) and in different settings. Feel free to use and study it in a neurology setting, perhaps using the short versions described above, available to download from the website.[8] We are happy to support training and research. Feedback is always welcome.

Key points

- Intrinsic motivation is a key component for achieving better outcomes for neurology patients.
- Simple interventions can improve intrinsic motivation and outcomes in neurological conditions.
- Brief versions of the intervention used in randomised trials can be used in everyday practice by members of the neurology team, including neurologists.

Further reading

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