DRIVING SERVICE CHANGE TO POWER INDEPENDENCE

From "Unseatable" to "Independent": Ellen's 7 year journey through the service - the rises, falls, and the changes we made to our service from reflecting on her patient experience.

An award-winning poster** by John Green (Principal Clinical Scientist) & Phil Jackson (Clinical Specialist)



Attends mainstream school. Bilingual Repeated requests for powered mobility Significant tonal problems

Progressive windsweeping & scoliosis

Predominant ATNR & dyskinesia Need for handcuffs

⊗ Only basic switches held in stock

⊗ Previous switch use had IT focus

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№ She'd never driven / moved independently before

Solution Solution Solution

⊗ Need consistency on switch before powered trial

Problematic head position (vision, engagement) No prior experience of independent movement **Current seating not meeting her needs**

+ Shifted our prescribing emphasis from foam carve to ABS shell (MSI) + Conducted in-house study (2019) — can we link ABS shells to tone reduc-

⊗ Concerns our routine foam-carves wouldn't manage her tone, but no access to other materials

Worried about potential pressure areas from ABS due to tone, repetitive movement & direct pressure

> Started by getting posture sorted

Cast for moulded seating redesigned ABS

Her tone relaxed more than expected—why?

Now she's sat—what about access method?



+ Linked to Wizzybug & Early Powered Intervention

Hardware for short-term loan to train individuals at home



⊗ We had no switch training information or hardware

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tion?

⊗ Are teaching switch skills even part of our Service remit?

⊗ Who has the skills to teach

Switch skills had to be

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broken down into core skills for driving, not IT

Needed to be practised at home to build skills and exercise tolerance



https://www.shinylearning.co.uk/freegames/



Special controls champions

+ Switch and alternative input

Ruled out—joystick, head

puff, sound switch, hand/

finger/ upper limb switch

SALT using eye-gaze but lim-

Repeatable PF of right foot,

Mum suggested bite switch

but this increased her

(touch or proximity)

ited success.

tone++

controls, chin controls, sip &

+ Special controls pathway

devices stock

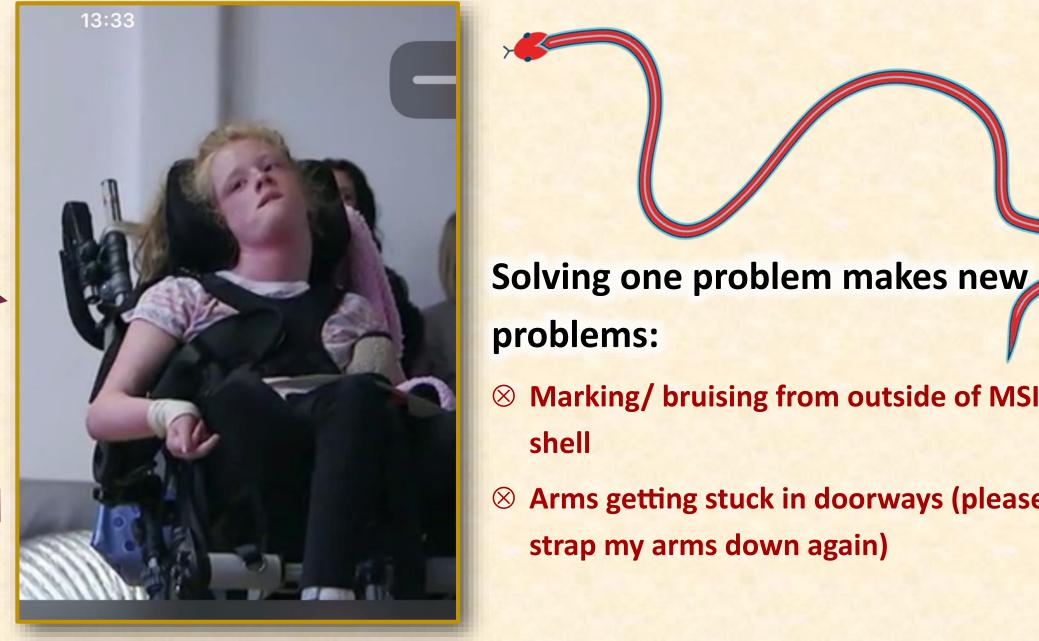
Equipment trial— how to do this for someone so complex without making a very complex chair???



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+ Learning standardised ways to mount MSI seating for people who hit solid things & special controls



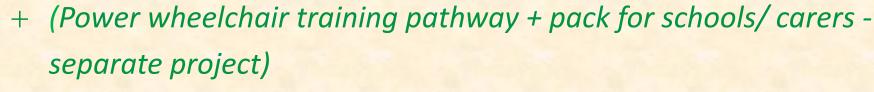
problems: **⊗** Marking/ bruising from outside of MSI

shell

⊗ Arms getting stuck in doorways (please strap my arms down again)



Padding to outside of MSI and a giant tray (but at least it kept her



+ Ellen using bite switch for access to IT and education

+ Links with SALT & agreement to joint-purchase switches

+ EMG switch driving trial — didn't work for Ellen, but might work for others



Current development project plans to:

- Reduce the force on Ellen's teeth
- Increase the durability of the switch
- Eliminate need for modifying switch
- Reduce costs of replacement components



+ Now using bite switch for driving, communication aid, and IT access at school, but.....

⊗ Bite switch needs replacing frequently due to daily heavy use

Each switch has to be manually modified from "stereo always open" to "mono always closed"



We're presenting this, but it's been a huge effort by the whole team at PAMS North Wales, Ellen, and her family. Thanks to everyone who's been a part in this.

Ellen would like you to think about her the next time you meet some-

one who'll "never be able to drive".

** Winner of the prestigious "Best Poster Written by John and Phil in June 2023" Award.

