Including physical fitness instructors within multidisciplinary acute stroke unit care

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Edinburgh Leisure

NHS Lothian

Rationale

- Recommended levels of physical activity
- High levels of evidence (Cochrane 2016)
- Inclusion in guidelines 2010/2016
- Inclusion in strategic drivers
- We know current EAS service performance...

- Can we do better?

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RESEARCH PAPER

From physical and functional to continuity with pre-stroke self and participation in valued activities: A qualitative exploration of stroke survivors', carers' and physiotherapists' perceptions of physical activity after stroke

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Abstract

Purpose: Physical activity (PA) improves fitness, functioning, health and wellbeing after stroke. However, many survivors are inactive. This study explored survivors', carers' and physiotherapists' beliefs about PA to identify how these support or hinder PA participation. *Methods*: Semi-structured in-depth interviews with community dwelling stroke survivors ($n = 38$); two focus groups involving six carers each; two focus groups, respectively, involving seven and eight stroke rehabilitation physiotherapists from clinical and community settings. Data were audio-recorded and transcribed. Analysis was structured using the Framework Approach to identify themes and a dynamic, conceptual model. *Findings*: Desired outcomes and control over outcome achievement were key concepts. For survivors and carers, PA supported participation in valued activities, providing continuity with pre-stroke sense of self. Carers adopted motivating strategies for PA to support recovery and participation in shared activities.

Keywords

Carer, exercise, physical activity, physiotherapist, stroke

History

Received 30 September 2013
Revised 20 March 2014
Accepted 20 March 2014
Published online 3 April 2014

Edinburgh Leisure Exercise pathway after stroke

- Edinburgh Leisure – since 2008

- Partnership with Lothian Stroke MCN – working group
- Four REPS Level 4 Stroke Specialist Instructors
- Circuit classes / one to one sessions on eight sites
- Participants could access either or both
- Physical and service evaluation

- Average annual referrals 42, community EAS 18

Exercise & Fitness Training After Stroke: Specialist Instructor Course







Queen Margaret University
EDINBURGH

laterLife training

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Adaptations and Tailoring

- **Adapting:** the condition-specific adaptations (modifications) to session aims, structure, content, teaching and programming that need to be made to ensure optimal safety and effectiveness with participants after stroke

- **Tailoring:** the highly individual prescriptive solutions (adjustments/additions, exclusions)

  that are required to tailor the adapted exercise intervention to each participant's health, functional and/or psychosocial/emotional needs

Scottish Stroke Improvement Programme (SSIP)

8.2. Exercise - Stroke patients being discharged home from hospital should have access to appropriately resourced, evidence-based exercise after stroke services; and patients with stroke are given advice about increasing their physical activity levels where appropriate.

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August 2014

Best Practice Guidance for the Development of **Exercise after Stroke Services** in Community Settings

Catherine Best, Frederike van Wijck, Susie Dinan-Young, John Dennis, Mark Smith, Hazel Fraser, Marie Donaghy, Gillian Mead

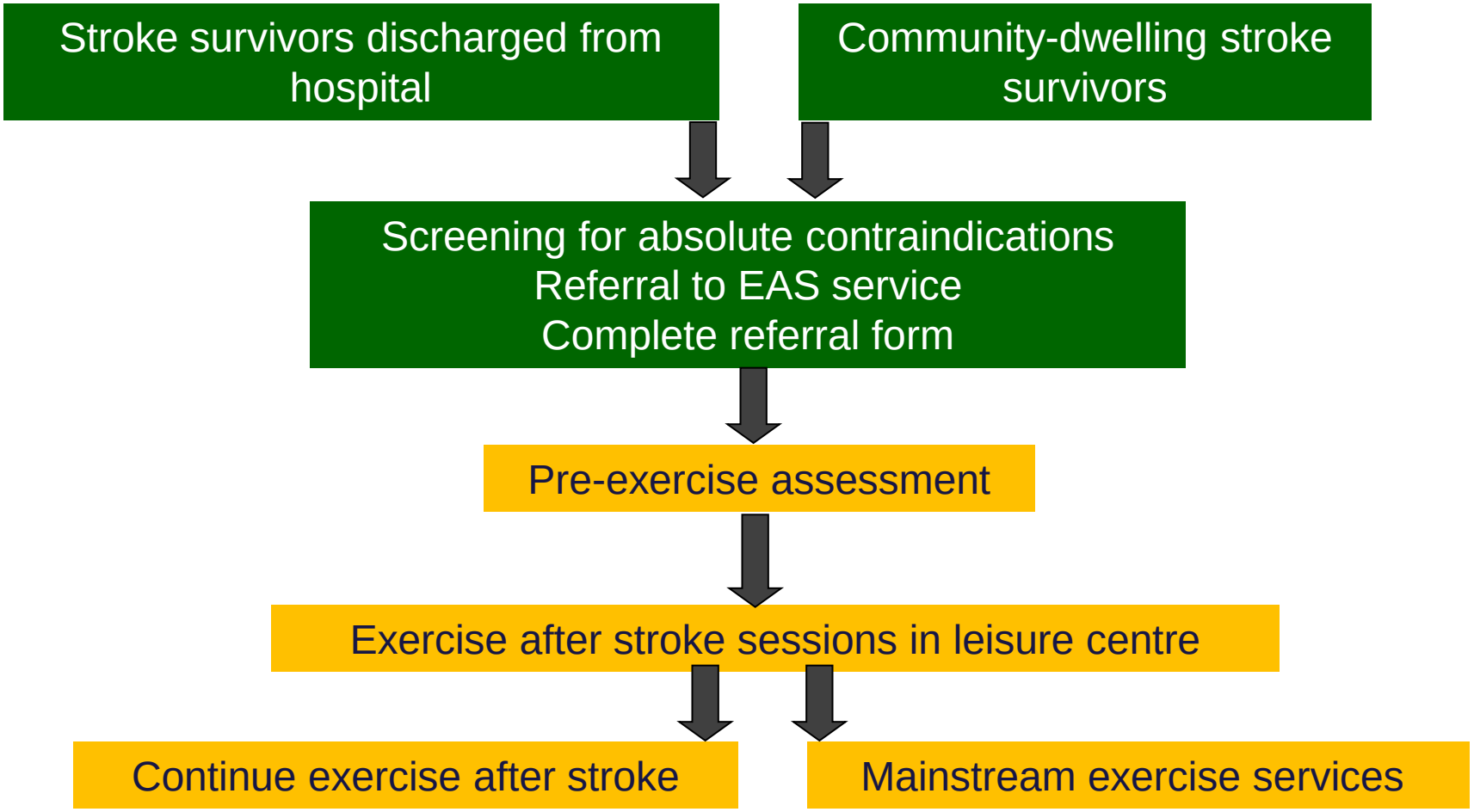
THE UNIVERSITY of EDINBURGH

November 2010

Referral pathways into community-based Exercise after Stroke

Health Care Professional role

Exercise Professional role



Edinburgh and Lothians Health Foundation Grant 2013

- £22 000

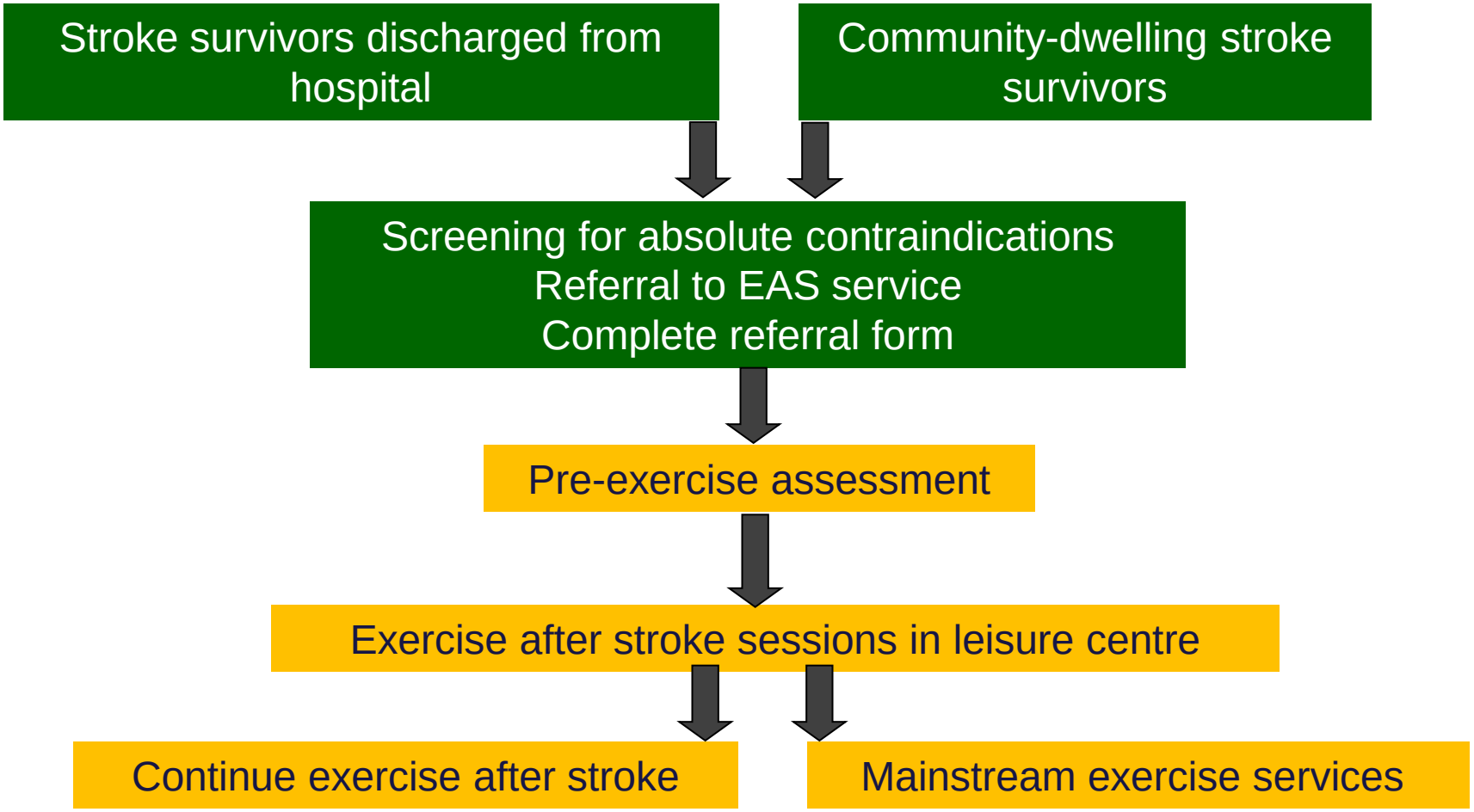
- Edinburgh Leisure REPS Level 4 Stroke Specialist Fitness Instructor to in-reach into 22 bed Acute Stroke Unit - Ward 101 RIE

- 12 months 0.5 wte
- Equipment provision
- MDT membership
- Fitness intervention in-house
- Meeting patient in leisure facility on discharge

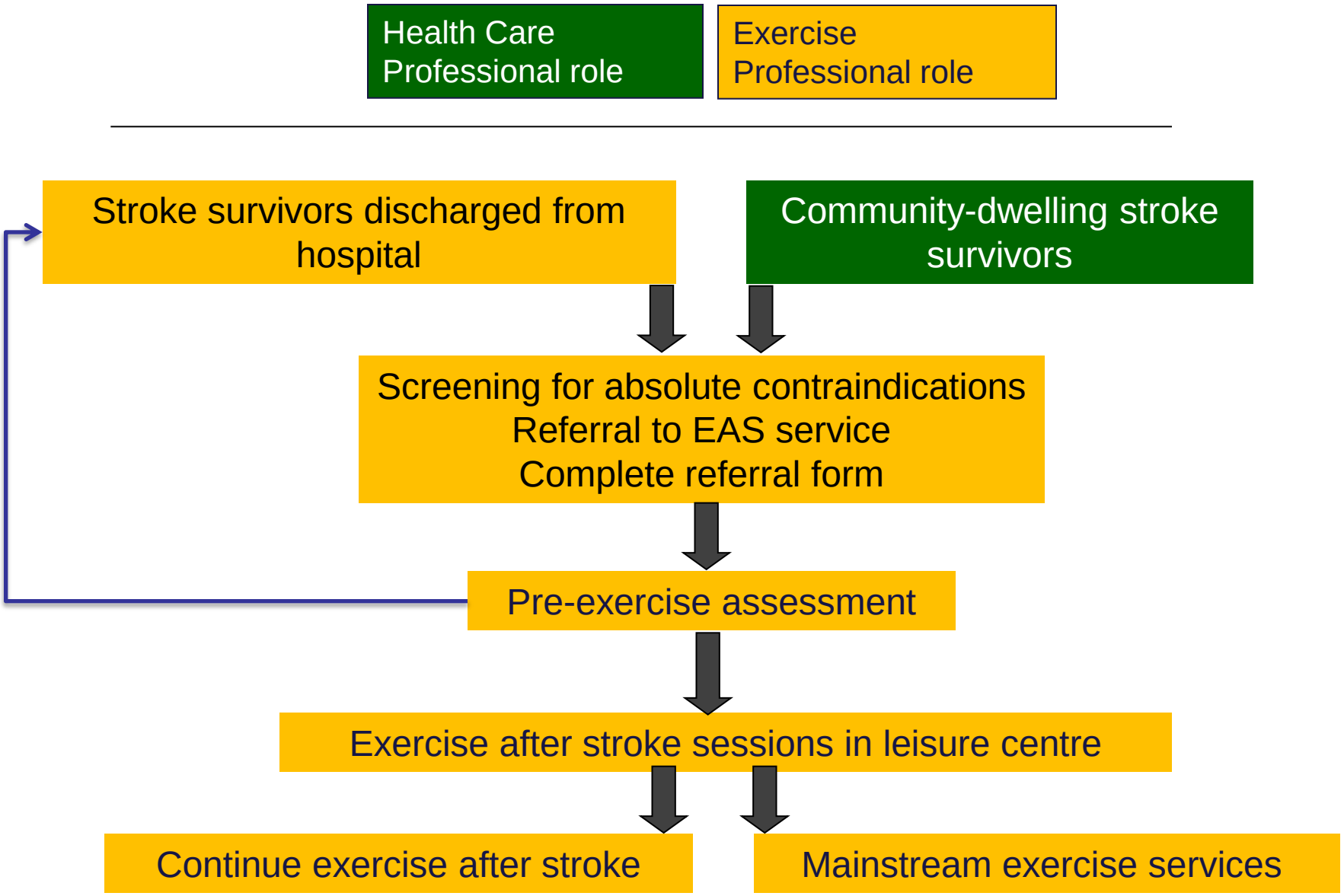
Referral pathways into community-based Exercise after Stroke

Health Care Professional role

Exercise Professional role



Referral pathways into community-based Exercise after Stroke



Time line

- Andrew Hebson in post 1st January 2014

- 3 month ramp up – testing small rapid cycles of change
- Full capacity April 2014
- 6 month service run until end September 2014
- 3 month ramp down including evaluation and exit strategy
- Quantitative and qualitative measures

- Queen Margaret University student focus groups/interviews with service users and staff

- Complete end December 2014

Evaluation of EAS in-reach service

- How many stroke patients….
  - Accessed the EAS in-reach service?
  - Used community EAS services?
  - Then went on to long-term exercise?

- What were the changes in fitness and function?
- What did stroke patients think about it?

  (*poster)*

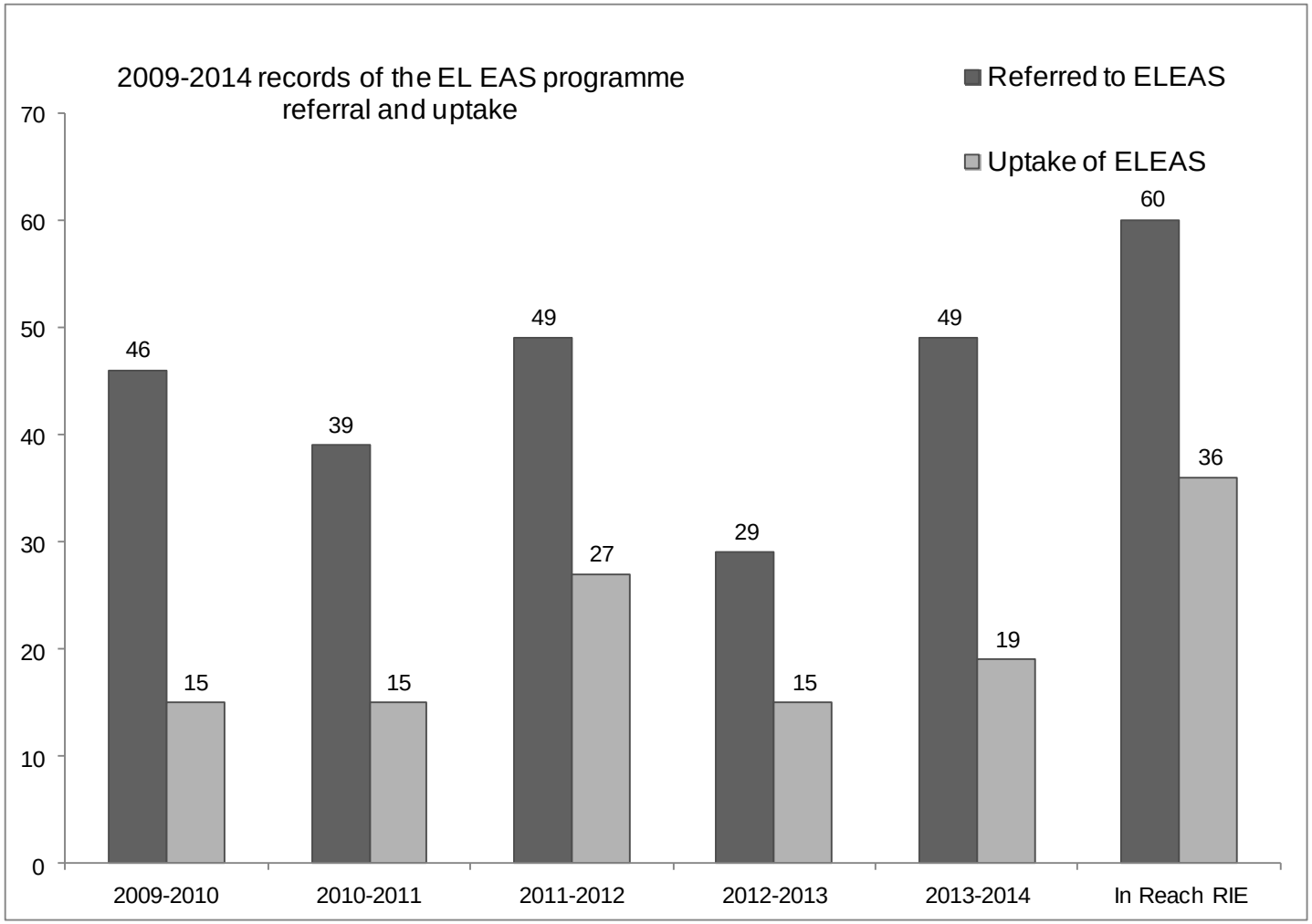
Results

from quantitative evaluation

Service use

- In the six months that the present project ran at capacity:

- 60 ISU inpatients met the criteria and referred to EAS in-reach on the ward
- 47 were seen by the exercise professional
- 13 could not be seen by the exercise professional on the ward before discharge, but had EAS advice
- 36 subsequently took up the referral into community EAS
- 34 reported that they were still engaged in EAS three months post discharge



Edinburgh Leisure EAS In-reach – during 6 months April – Sept 2014

Outcomes from Edinburgh Leisure EAS In-reach Service

Tests, (n)	Baseline		Final (3 months)		Mean difference	SD difference	p value
	Mean	Standard Deviation	Mean	Standard Deviation			
TUAG* *sec*, (21)	14.21	9.05	8.42	2.44	5.80	7.61	<0.001
10 MWT* *(sec)*, (21)	11.58 (0.86m/s)	6.17	7.07 (1.41 m/s)	2.54	4.50	5.03	<0.001
SIS Overall Recovery* (0-100), (25)	58.16	19.37	80.32	19.96	22.16	15.43	<0.001
Legend - * Statistically significant (p<0.05), TUAG= Timed Up and Go, 10MWT=10 Metre Walk Test, SIS Base= Stroke Impact Scale Overall Recovery, ELEAS= Edinburgh Leisure Exercise After Stroke							

Participants self-perception of mental wellbeing and recovery

Tests	n	Baseline		Final	
		Median	*IQR*	Median	*IQR*
WEMWBS*	20	47.5	*15*	57.5	*18*
SIS 1- Strength*	25	75	*21.9*	100	*25*
SIS 2- Memory*	25	89.3	*23.2*	92.9	*17.8*
SIS 3- Emotion*	25	63.9	*13.9*	77.8	*29.2*
SIS 4- Communication	25	92.9	*19.6*	96.4	*14.3*
SIS 5- Activities of Daily Living*	25	90	*16*	97.5	*7.5*
SIS 6- Mobility*	25	83.3	*22.3*	94.4	*11.1*
SIS 7- Hand function	25	85	*30*	95	*17.5*
SIS 8- Social Participation*	25	56.3	*29.7*	96.9	*20.3*

* Statistically Significant ($p<0.05$).
WEMWBS= Warwick Edinburgh Mental Well-Being Scale,
SIS= Stroke Impact Scale,

“Feelings about the EAS in-reach service”

- *“… when JIM came along it was totally different, it was more about talking aboot you taking part in something [George, Hannah and Ken nod] where all the other things when other people came along you know … they were all part … doing medical things to you … you’ve kind of gone through this system you know, like they had a list to tick off you know...”*

- *“It was such… so important to actually be doing something and I think that’s the thing about the exercises … it’s so easy to just sit there and get waited on hand and foot, it’s really nice, but it isnae helpin’ your body...”*

- *“And before you get a chance to get down about what happened to you there was something positive to look forward to…cause you know I think everybody does get down... ”*

- *…and JIM says ‘right, walk up to that bollard and walk back’ and he says ‘well you did that twice as fast as you did before’. Now that’s important because I didnae realise how slow I was...”*

Key learning

- Exercise and health care professionals should work more closely together to develop pathways into EAS
- We need to better understand the barriers and motivators in order to improve the uptake of physical activity after stroke
- We found that introducing an exercise professional into the acute stroke unit MDT improved uptake of community EAS and was well-received by patients...
- Ways to take this forward...

ELHF Grant 2013

- Project team:

• Prof Gillian Mead	University of Edinburgh
• Aisha Chaudhary	Edinburgh Leisure
• Hannah McCrae	Edinburgh Leisure
• Lynne Irons	Edinburgh Leisure
• Andrew Hebson	Edinburgh Leisure
• Wendy Cameron	Physio RIE
• Anna Redpath	Physio RIE
• Pauline Halliday	OT RIE
• Laura Egan	OT RIE
• Andy Peters	AHP R&D Facilitator NHS Lothian
• Dr Kavi Jagadamma	Queen Margaret University
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  Later Life Training

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