

# Optimising initiation, attendance and retention to a community based chronic illness rehabilitation programme (CBCIR): MedEx Wellness



**Emer O’Leary**<sup>1, 2</sup>, Prof. Niall Moyna<sup>1</sup>, Dr. Frank Doyle<sup>3</sup>, Dr. Noel McCaffrey<sup>1</sup>, Dr. Brona Furlong<sup>1</sup>, Dr. Deirdre Walsh<sup>1</sup>, Prof. Catherine Woods<sup>1,4</sup>,



UNIVERSITY  
of  
LIMERICK  
OLLSCOIL LUIMNIGH

<sup>1</sup> MedEx Research Cluster, School of Health and Human Performance, Dublin City University, Ireland

<sup>2</sup> DCU Sport, Dublin City University, Ireland

<sup>3</sup> Division of Population Health Sciences, Royal College of Surgeons in Ireland, Ireland

<sup>4</sup> Health Research Institute, Department of Physical Education and Sport Sciences, University of Limerick



RCSI

- Background and context
- Methods
- Results
- Conclusion

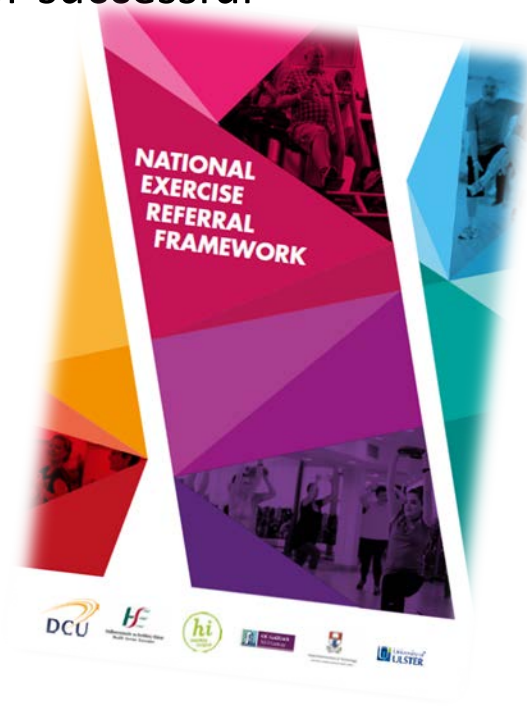
The role of PA in the prevention and control of non communicable diseases is well recognised internationally.





- ↑ The proportion of those active at all life stages
- ↑ The degree to which diseases and conditions are either prevented, or detected early to allow for successful intervention.

Development of NERF: exercise referral has been identified as an effective intervention



- Other models of rehab have adherence of approx. 70% following referral and initiation
- General adherence to exercise at 24 weeks is less than 50%

**Sub-optimal**

- To design, implement and evaluate and intervention to optimise 24-week adherence to a Community based chronic illness rehabilitation programme.





- MedEx Wellness
  - Longer term rehabilitation setting
  - Multi chronic illness
  - Recommendation of twice weekly participation



MedEx  
Wellness



Referral



Standard MedEx Induction  
N=381



New MedEx Induction  
N=195



## Standard MedEx Induction

## New MedEx Induction

- Physical testing (ISWT, Sit to stand, body comp)
- Questionnaire completion (demographics, Self-efficacy, social support, intentions)
- Brief presentation



Exercise consultation at baseline, four weeks, twelve weeks.

- Beginner exercise session
- Re-assessment at twelve weeks/w feedback.

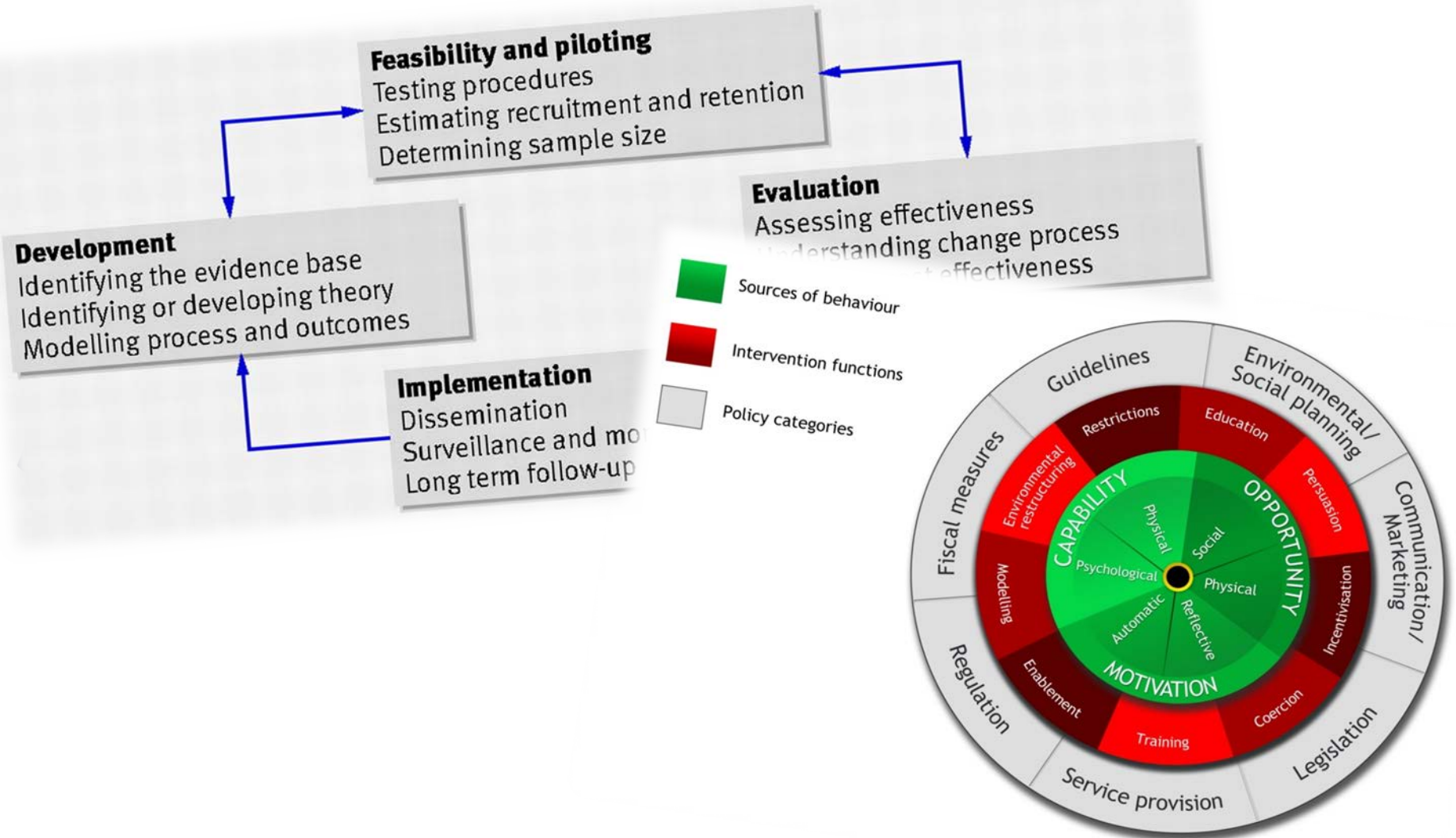


Table 1 Behaviour change techniques used in intervention

Induction	Exercise Consultation at induction	at Beginner Session at induction	Exercise week 4	Exercise Consultation at week 12
5.1 Information about Health Consequences	1.1 Goal Setting behaviour	4.1 Instruction on how to perform the behaviour	1.5 Review behaviour goals	1.5 Review behaviour goals
9.1 Credible Source	1.2 Problem Solving	3. Social Support	1.1 Goal setting behaviour	1.1 Goal setting behaviour
	1.4 Action Planning		1.2 Problem solving	1.2 Problem solving
	9.2 Pros and Cons		1.4 Action planning	1.4 Action planning
	4.1 Instruction on how to perform the behaviour		2.2 Feedback on behaviour	2.2 Feedback on behaviour
			10.4 Social reward	10.4 Social reward
			15.3 Focus on past success	15.3 Focus on past success



# Participant characteristics (N=576)



42%

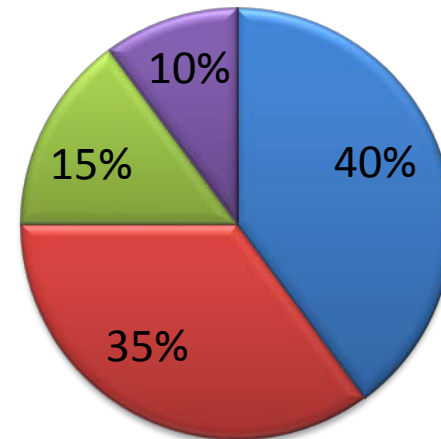


58%

Mean age 64.39  
(SD=11.4)

Mean distance  
10.5km  
(SD=15.7)

Programme



- HeartSmart
- BreatheSmart
- SmartSteps
- DiabetesHS

## Baseline descriptive statistics (Psychosocial)

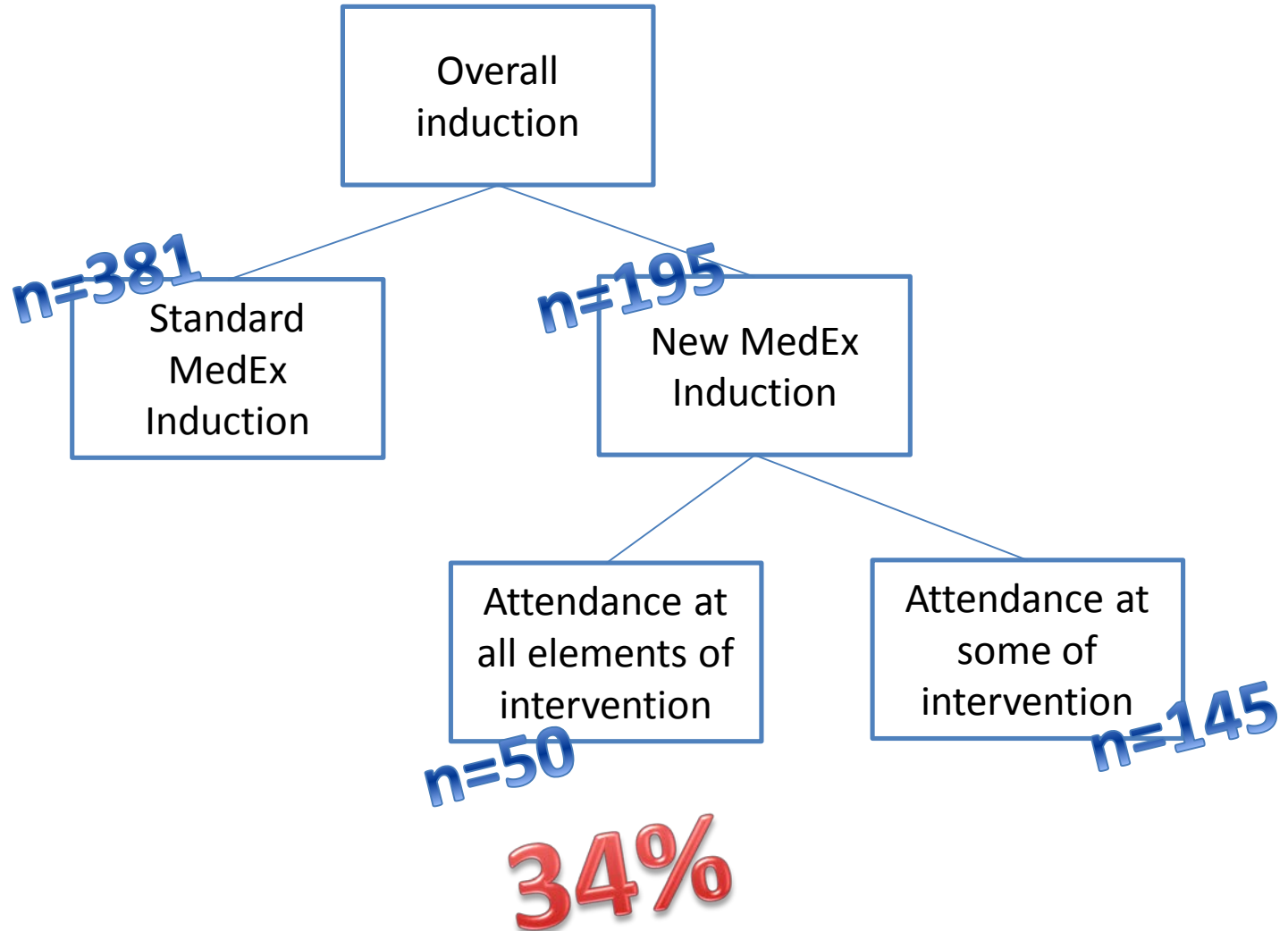
	Standard MedEx Induction Group			New MedEx Induction Intervention Group			Mann-Whitney U
	n	Mean (Median)	SD	n	Mean (Median)	SD	P value
Self-efficacy	265	7.31(7.72)	2.27	147	7.47(7.9)	1.99	.830
Social support family	266	2.07(2.0)	1.02	147	2.07(2.0)	1.17	.505
<b>Social Support friends</b>	<b>195</b>	<b>1.68(1.3)</b>	<b>.89</b>	<b>109</b>	<b>2.06(1.87)</b>	<b>1.06</b>	<b>.004*</b>
Intention	268	3.30(3.33)	.63	180	3.35(3.37)	.54	.555

Table 2 Baseline descriptive statistics (health related fitness)







	Standard MedEx Induction Group			New MedEx Induction Intervention Group			Mann-Whitney U
		Mean (Median)	SD		Mean (Median)	SD	P value
<b>Lower body strength (seconds)</b>	<b>321</b>	<b>20.09(19.1) 6</b>	<b>6.3</b>	<b>181</b>	<b>23.31(21.26)</b>	<b>8.36</b>	<b>&lt;.001**</b>
BMI	321	28.89(29)	6.48	186	28.92(29.30)	6.55	.919
<b>Flexibility (cm.)</b>	<b>337</b>	<b>7.96(8)</b>	<b>8.74</b>	<b>179</b>	<b>5.63(5.5)</b>	<b>9.36</b>	<b>.011*</b>
6 minute time trial (meters)	59	459.76(482)	131.32	165	442.59(460)	116.02	.209



# Participation in intervention



Primary outcome measures		Intention to treat (New Induction group)		Per protocol (New induction group)		Standard MedEx Induction	
<b>Initiation (%)</b>	N=195	76.9%	N=50	96%**	N=381	72.7	
<b>Attendance mean (median)</b>	N=150	15.78(14)* *	N=48	23.14 (24)**	N=279	15.19(12)	
<b>Retention (%)</b>	N=150	38.7%**	N=48	56.3%**	N=279	28.7%	

- Social support from family 
- Social support from friends 
- Self-efficacy for exercise 
- Intentions for exercise 
- Feedback/improvement  



- A theoretically designed intervention can improve adherence to community based chronic illness rehab.
- Attendance at all elements of intervention is far superior.
- Mechanisms for action not fully captured.



- Thanks for the support from DCU Sport and The School of Health and Human Performance.
- MedEx clients for their participation.
- All the supervisors for their ongoing support.







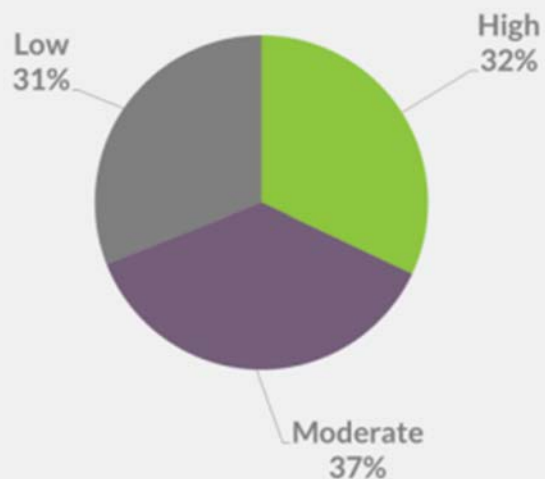
Table 3 Process measure											
	Baseline			12 weeks							
				Intention to treat (Full sample)				As per protocol (All components of intervention attended)			
Variable	n=186	Mean (median)	SD	N=186	Mean (median)	SD	P values	N=49	Mean (median)	SD	P-values
<b>Psychosocial</b>											
<b>Social support Family</b>	172	2.3 (2)	1.17	101	2.46(2.25)	1.06	.501	43	2.48(2.25)	.95	.073
<b>Social support Friends</b>	109	2.06(1.87)	.39	94	2.28 (2.06)	.98	.056	39	2.19(2.12)	.90	.003*
<b>Intentions for exercise</b>	180	3.35 (3.37)	.54	104	3.3(3.25)	.52	.126	45	3.31 (3.25)	.39	.642
<b>Self-efficacy (self-regulation)</b>	147	7.47 (7.9)	1.99	97	73.72(76.36)	17.84	<.001**	44	7.22(7.36)	7.3	.088
<b>Self-efficacy barriers</b>	173	60.43 (61.5)	23.59	99	57.88(57.69)	21.17	.096	43	54.47(53.84)	18.03	.318
<b>SF12 (physical)</b>	159	34.35(33.17)	8.69	20	42.57(44.93)	5.97	.109	8	42.72 (44.45)	7.04	.180

**Table 3 Process measure**

	Baseline			12 weeks							
				Intention to treat (Full sample)				As per protocol (All components of intervention attended)			
Variable	n=186	Mean (median)	SD	N=186	Mean (median)	SD	P values	N=49	Mean (median)	SD	P-values
Six-minute time trial	165	442.59(460)	116.02	106	501.46(511)	152.55	<.001**	49	487.78(510.84)	139.84	<.001**
Strength	181	23.31(21.26)	8.36	117	28.31(19.1)	90.75	.001**	49	20.10(20.15)	4.75	<.001**
Flexibility	180	11.15(5.5)	74.62	110	17.87(7)	90.39	.381	49	5.72(8)	9.48	.670
BMI	186	28.92(29.3)	9.55	183	21.32(26.20)	14.35	<.001	49	29.06(29.02)	7.34	.143
IPAQ											
Moderate MET minute	173	758.29(60)	1588	127	841.76(120)	1519.66	.102	46	527.82(0)	2621.37	.033*
Vigorous Met Minutes	174	875.63(0)	2171.91	12	887.87 (0)	1991.87	<.001**	47	842.55(0)	1760.35	.019*



Level of Physical Activity



The proportion that are highly active decreases with age, with only 15% of those aged 65 and over highly active.

