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# The Whole System Demonstrator project

Prof Stanton Newman

Principal Investigator



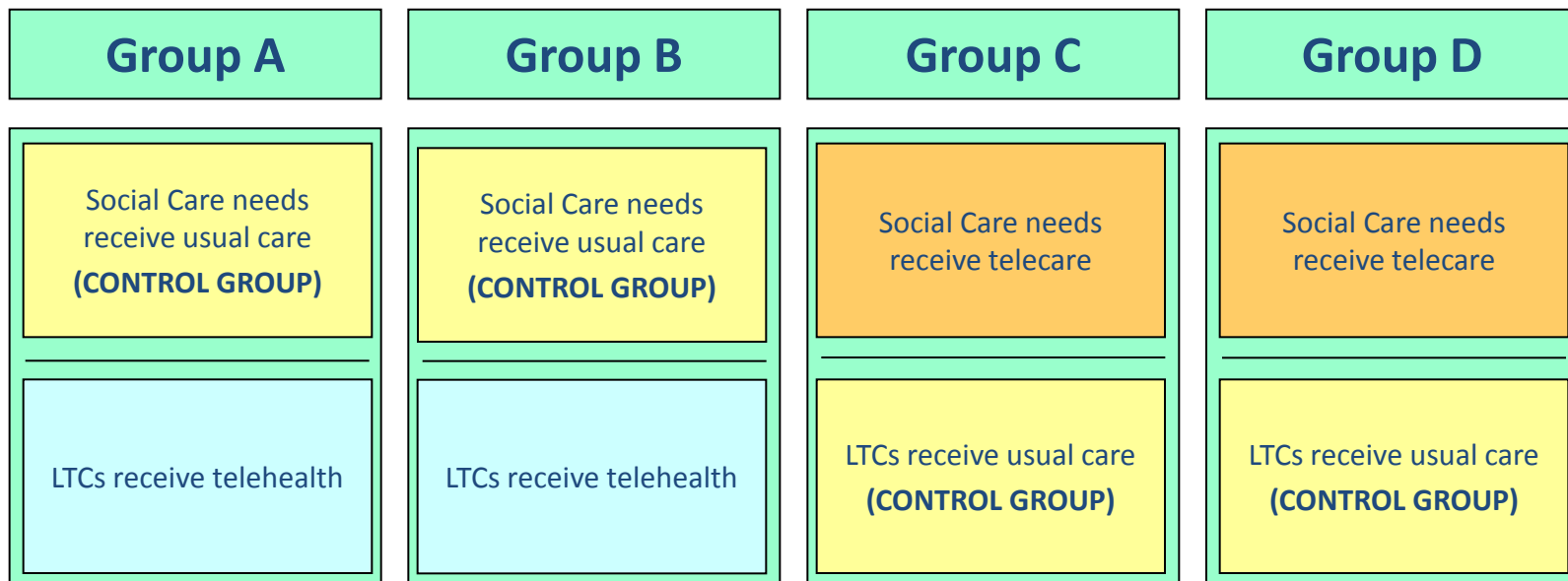
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## Overall Aim

- Aim: to provide a comprehensive evaluation of the addition of telecare and telehealth to whole systems re-design.
- Project planned to assess up to 6,000 individuals and up to 660 carers with a variety of methods and levels of analysis.



# WSD Evaluation Cluster RCT design





## Theme 1

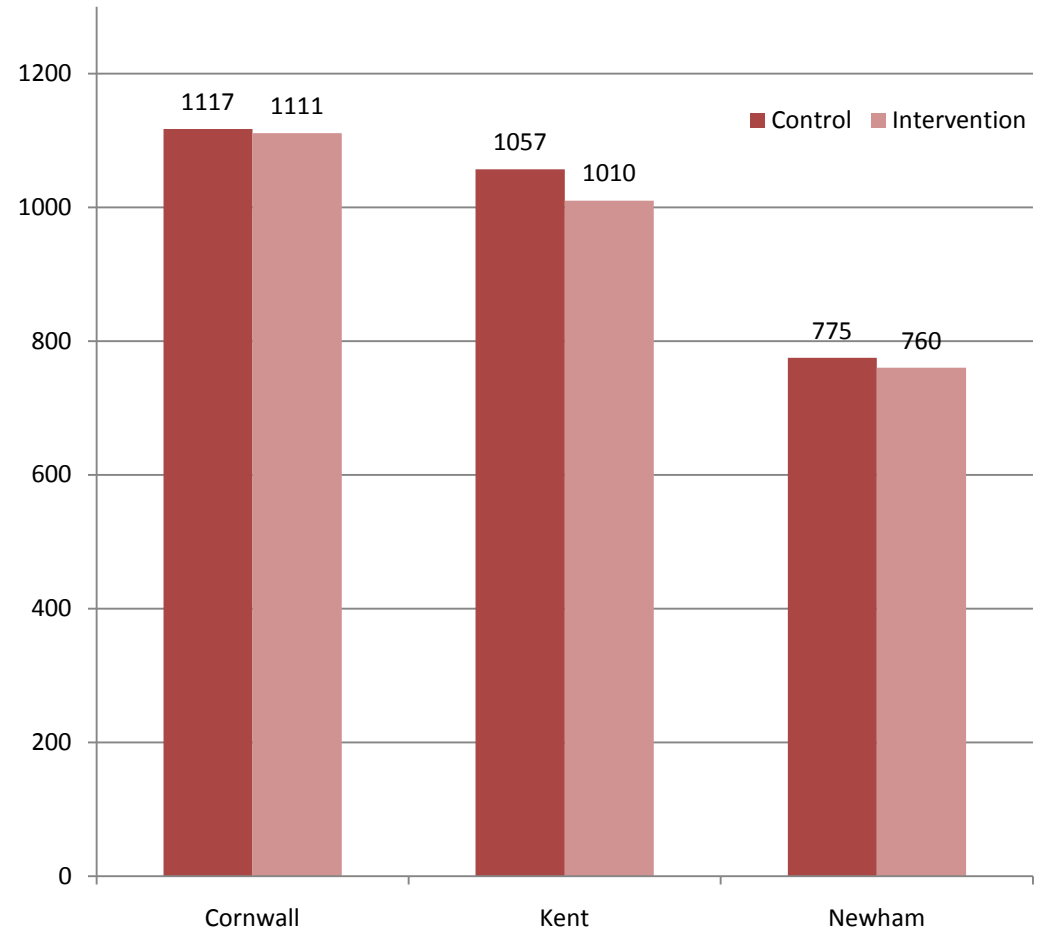
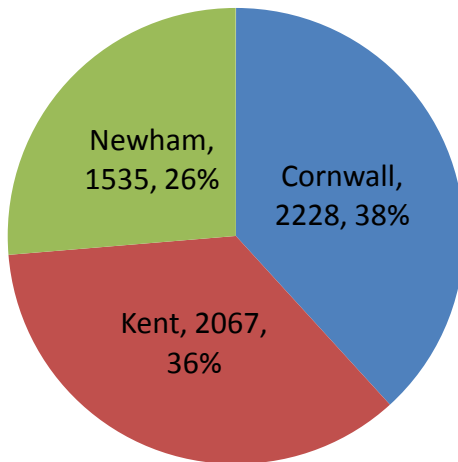
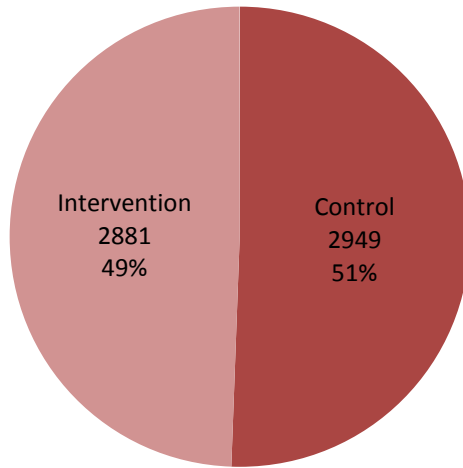
THEME 1	OVERALL AIM OF EVALUATION THEME	NO. PARTICIPANTS REQUIRED
<p><b>Does the introduction of telehealth or telecare result in reduction in service utilisation and costs of care?</b></p> <p>Impact on service use and associated costs for the NHS and social services (return on investment).</p> <p>Combined Model + Community/Social Care Analysis</p>	<p>To identify the impact of TH &amp; TC on NHS and social care utilisation and costs in trial versus control groups, across the whole programme and the three sites.</p> <p>It will also identify any impact on health &amp; care utilisation and costs compared to trends observed in similar cases in England.</p>	<p><b>5721 participants</b></p>



# Total Numbers recruited

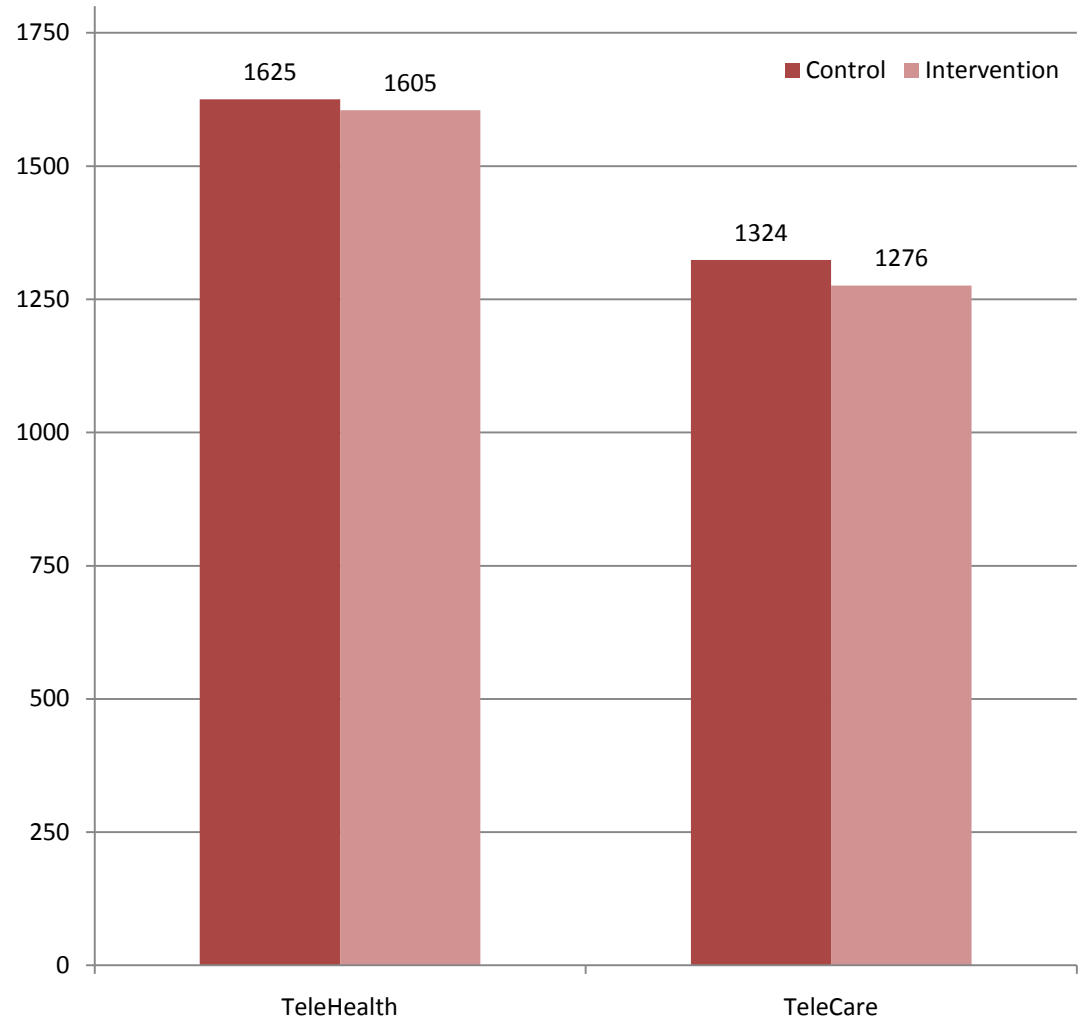
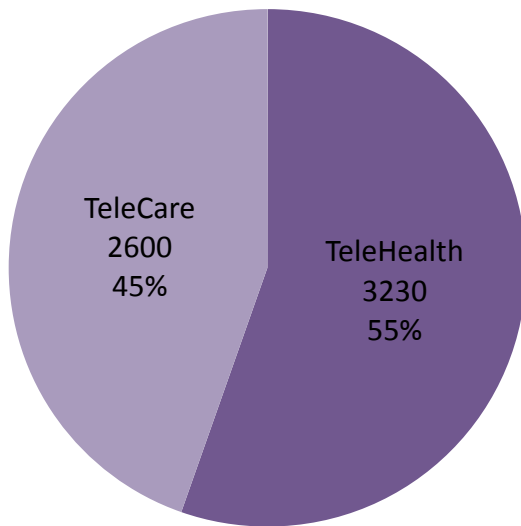
Target 5721

Recruited: 5831





# Total Numbers recruited





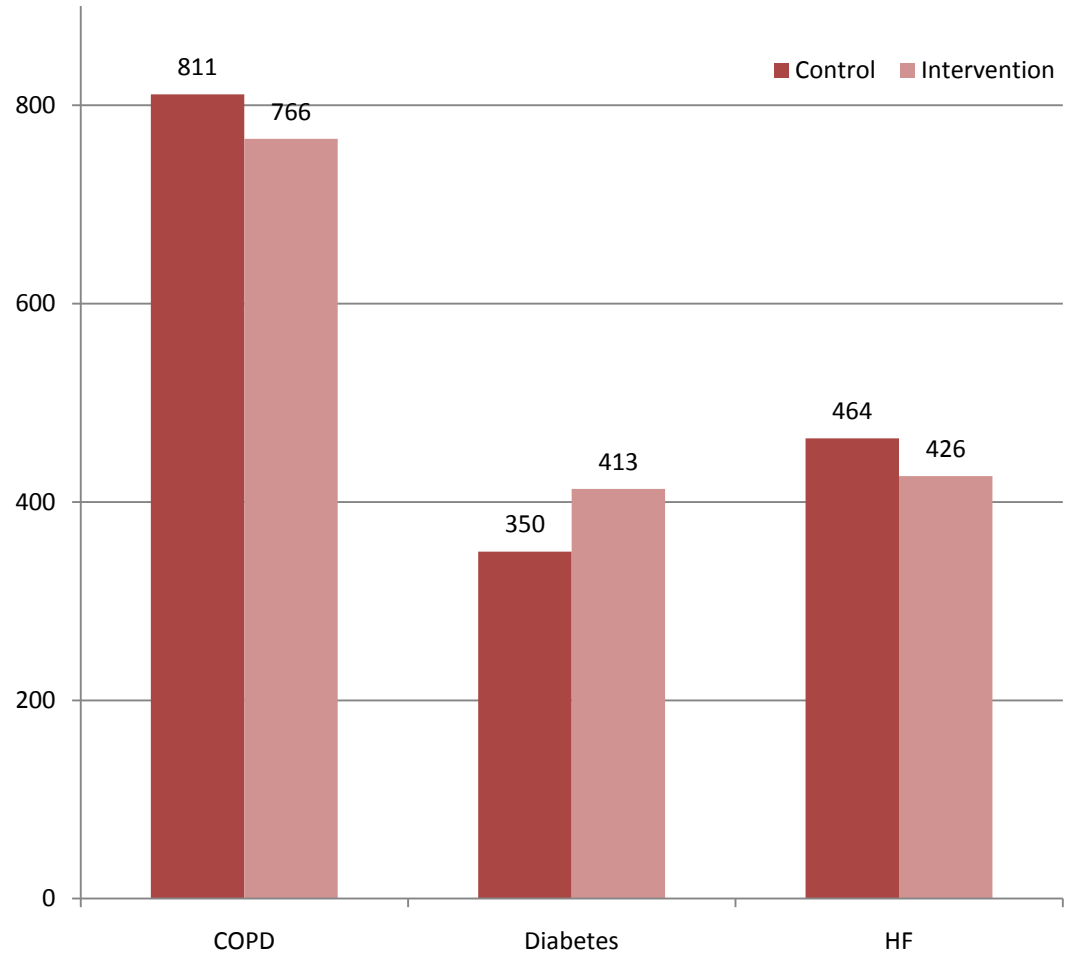
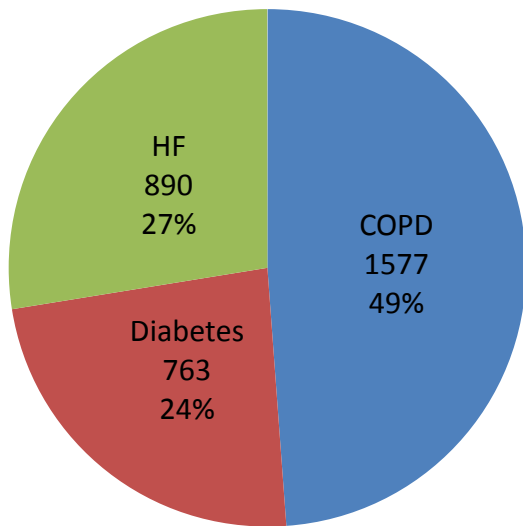
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# Participants

- Patients with long term conditions (heart failure, COPD and diabetes)
- Patients with social care needs



# Total Numbers recruited

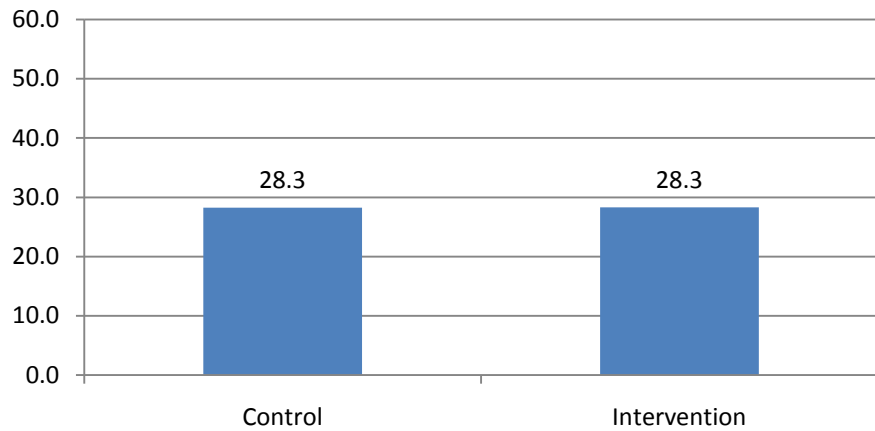




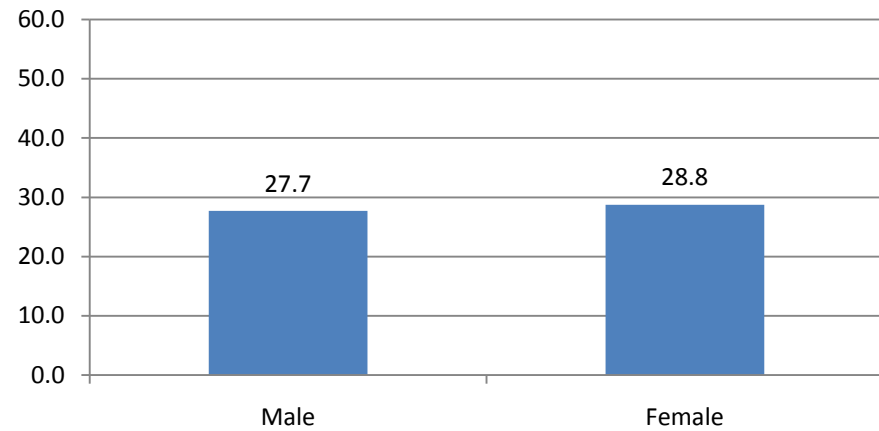


# Total Numbers recruited

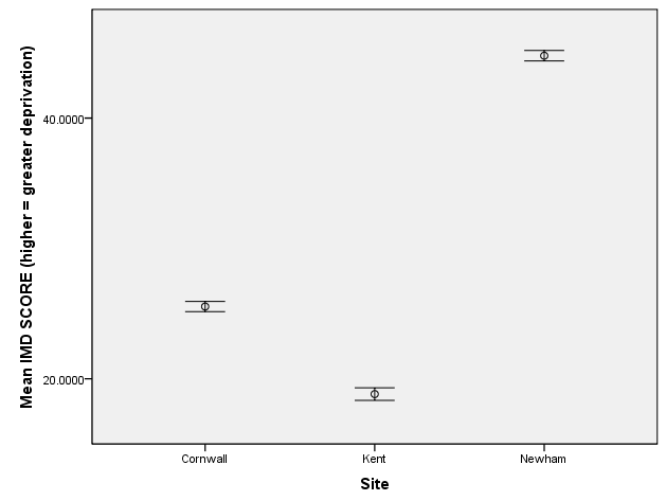
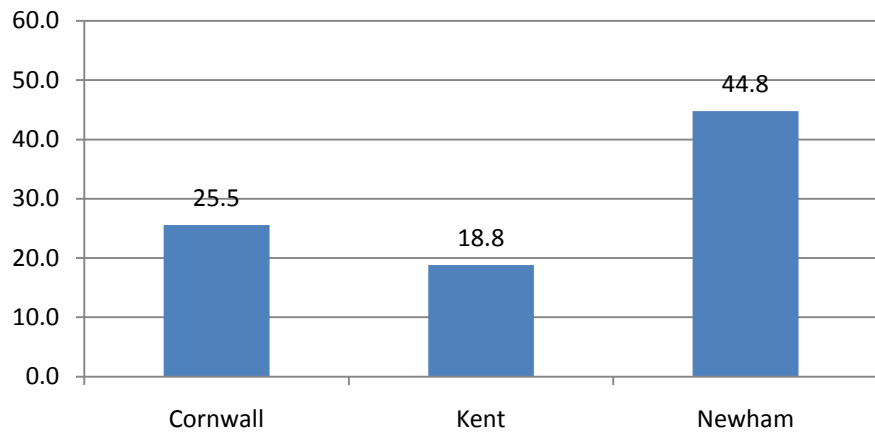
### Mean Deprivation Score



### Mean Deprivation Score



### Mean Deprivation Score



Error Bars: 95% CI



## Theme 2

THEME 2	OVERALL AIM OF EVALUATION THEME	NO. PARTICIPANTS REQUIRED
<p><b>Participant reported outcomes</b></p> <p><i>What is the effect on carer burden, self-care behaviours and quality of life?</i></p> <p><i>What predicts whether people will use the service as planned?</i></p>	<ol style="list-style-type: none"><li>1. Does the use of telecare reduce informal carer burden and social isolation and improve psychological well-being?</li><li>2. What is the impact of telehealth packages on self-care behaviours, self-efficacy and empowerment in people with long term conditions?</li><li>3. What factors predict the use and impact of (a) telecare and (b) telehealth amongst service users and informal carers?</li><li>4. What are the mechanisms by which (a) telecare and (b) telehealth may impact on service user and informal carer outcomes e.g. empowerment, quality of life?</li></ol>	<p>3160 participants 470 informal carers</p>



## Theme 3

THEME 3	OVERALL AIM OF EVALUATION THEME	NO. PARTICIPANTS
<p><b>Cost and cost-effectiveness</b></p> <p><i>What is the cost-effectiveness of the introduction of telecare?</i></p> <p><i>What is the cost-effectiveness of the introduction of telehealth?</i></p>	<p>To assess cost-effectiveness of the introduction of TH and TC, investigating the typical resource inputs and identifying the routine activities that are associated with the interventions. It will determine what a typical care package for a TH or TC user is and will further seek to assess the impact of this on the use of healthcare, social care and benefits.</p> <p>Finally, this theme will seek to understand if the use of TH or TC as part of a care package improves the self-reported quality of life of service users and their carers.</p>	<p>3160 participants 470 informal carers Professional interviews</p>



## WSD Questionnaires

### Psychological Well-being

**Brief STAI** Short form state anxiety measure

**CES-D 10** Short form Depression Scale

### Quality of Life

**UK SF12** Measure of health-related quality of life

**EQ-5D** Measure of health outcome – also utilized for QALYs

**MLHFQ** Minnesota Living with Heart Failure Questionnaire - measure of patients' perceptions of the effects of congestive heart failure on their lives

**CRQ** Chronic Respiratory Questionnaire - measure of quality of life for patients with chronic lung disease

**DHP** Diabetes Health profile – disease specific quality of life measure

**TDS** Townsend Disability index of activities that assesses physical ability in social terms (12mth & EUS)



## WSD Questionnaires

### Self-care behaviours

#### **EHFSCB**

European Heart Failure Self Care Behaviours scale measures behaviours that heart failure patients perform to maintain life, healthy functioning, and well-being

#### **COPD-SCB**

Chronic Obstructive Pulmonary Disease Self-Care behaviours scale

#### **SDSCA**

Summary of Diabetes Self-Care Activities Measure - brief self-report questionnaire of diabetes self-management

#### **GSCBS**

Generic Self-care Behaviours scale - examines the use of 6 recommended health care behaviours

#### **HEIQ**

Health Education Impact questionnaire (selected scales) - to monitor perceived impact and quality of health education programs



## WSD Questionnaires

### Cognitive measures

- SCB-SES** Self-care Behaviours Self Efficacy Scale - examines individuals confidence in performing self-care behaviours
- Generalised SES** Generalised Self Efficacy Scale - assesses optimistic self-beliefs to cope with a variety of difficult demands in life
- SUTAQ** Service User Technology Acceptability Questionnaire – technology users beliefs and perceptions of the equipment (e.g. impact of kit on communication, concerns with confidentiality, anxiety using kit)
- Illness Strain Index** Measure of strain related to having a chronic illness – (revision of CGSI for cared for individual)
- Impact of Illness Scale** Measures the degree that illness/problems interferes with key roles and responsibilities in daily living
- Subjective Norms** Measures the individual's estimate of the social pressure to perform or not perform the target behaviour



## WSD Questionnaires

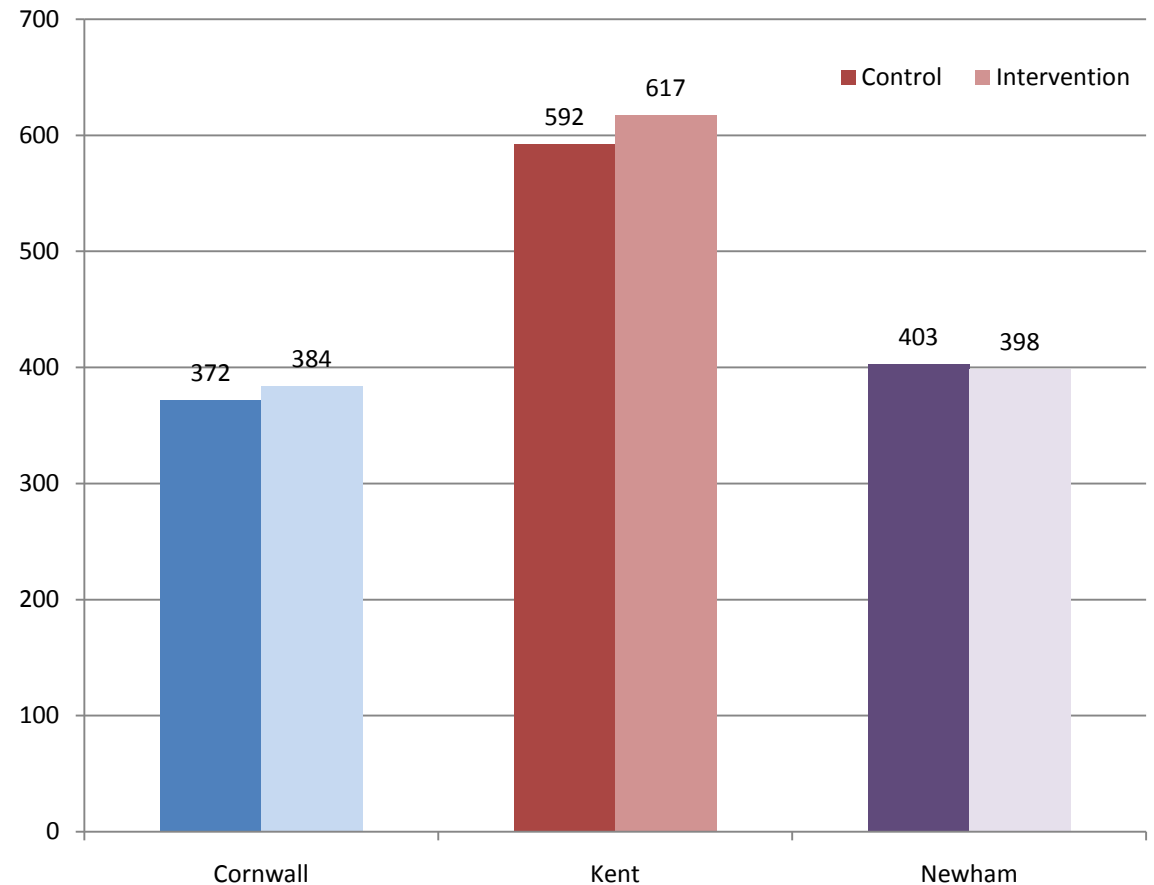
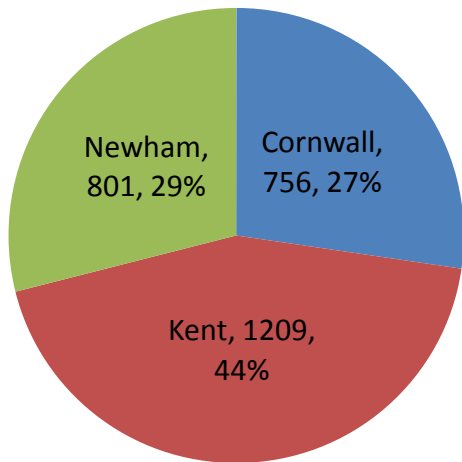
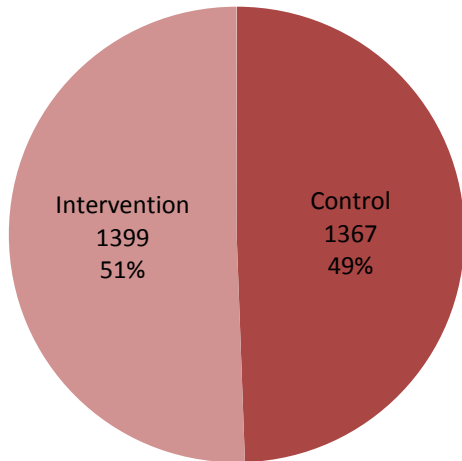
### Additional measures

- ICECAP** ICEpop CAPability measure for Older people - for economic evaluation of health and social care interventions
- ASCOT** Adult Social Care Outcomes Toolkit - social care related quality of life (selected items)
- CSRI** Client Services Receipt Inventory - cost-related information about people with health problems for use in health service evaluations, calculates a total weekly cost of care package
- SNAI** Social Network Assessment Instrument – identifies participants social network type
- CCA** Carer’s confidence and anxiety when looking after others
- CGSI** Care-giver Strain Index - measuring strain related to care provision;



# Themes 2 & 3

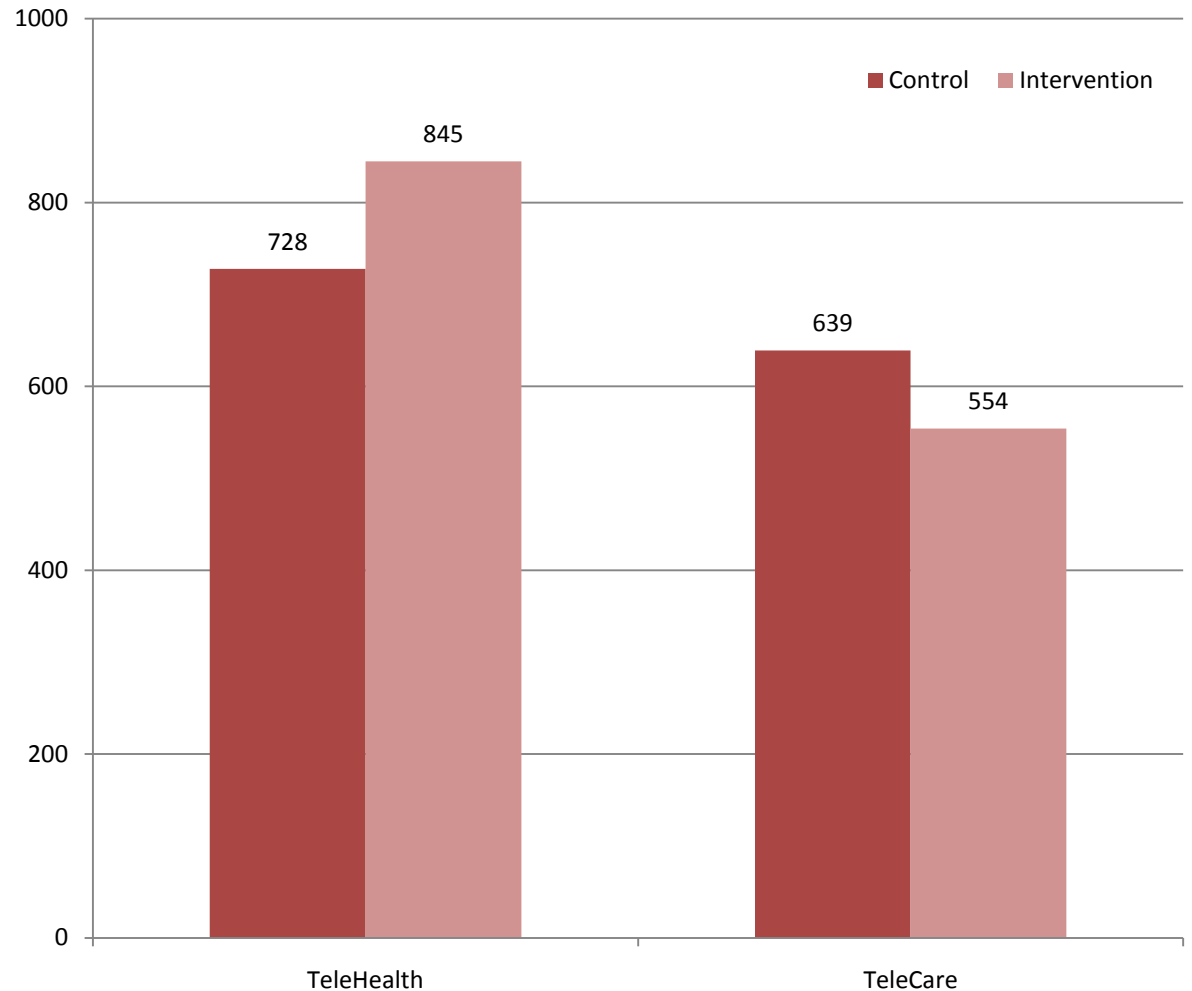
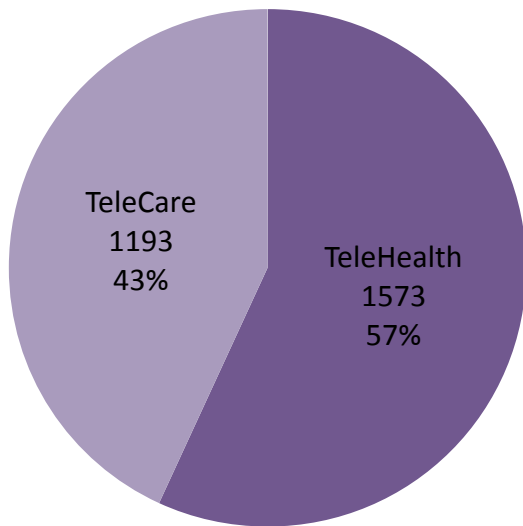
## Number of Participants







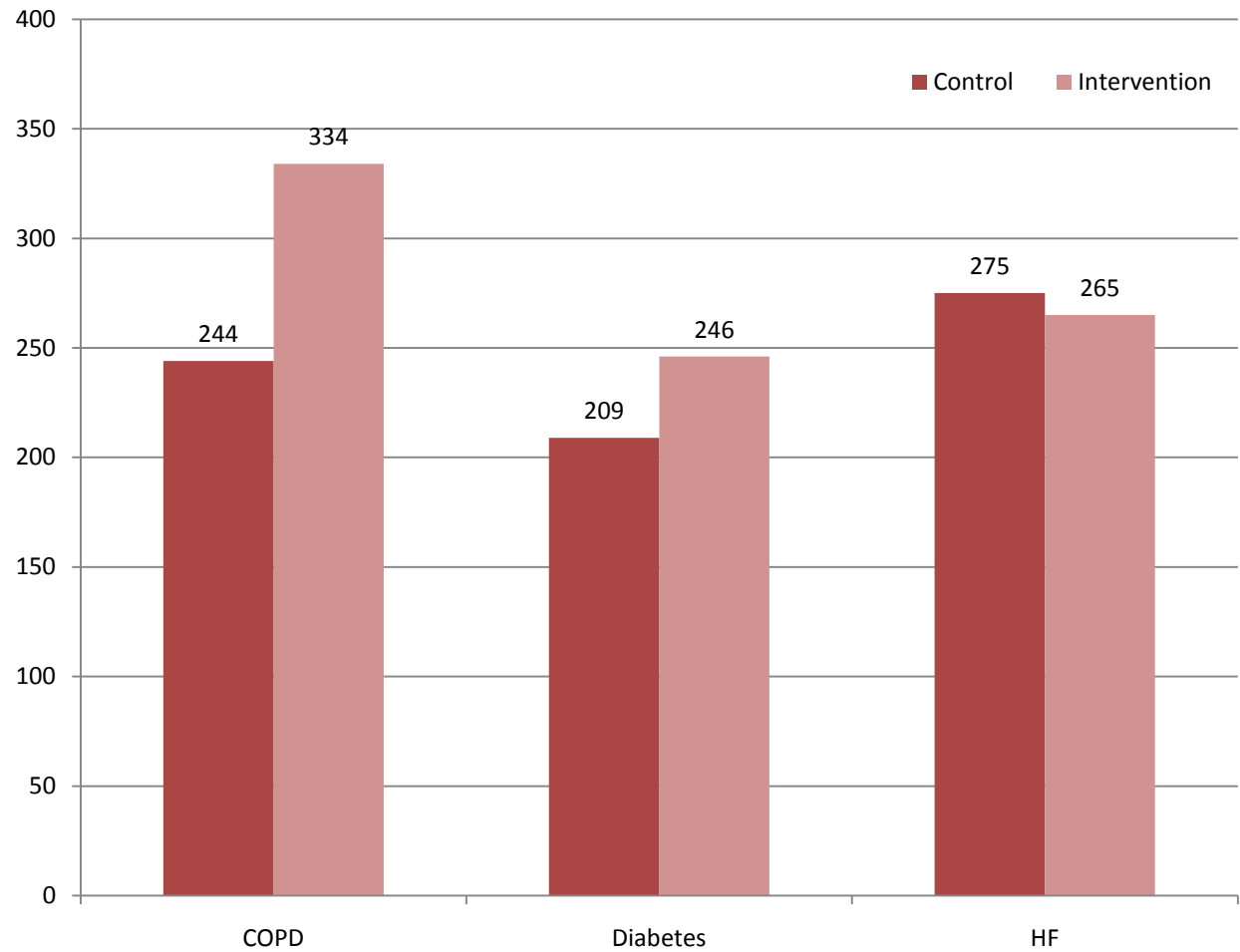
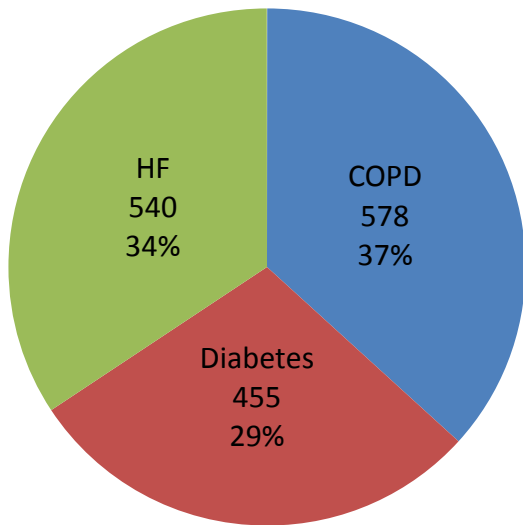
# Themes 2 & 3 Number of Participants





# Themes 2 & 3

## Number of Participants





## Theme 4

THEME 4	OVERALL AIM OF EVALUATION THEME	NO. PARTICIPANTS REQUIRED
<p><b>Qualitative study.</b></p> <p><b><i>What are the service users, informal carers and health and social care professionals' experiences of telehealth and telecare?</i></b></p>	<p>What are the service delivery arrangements and personal service user and professional long-term condition management prior to the introduction of the schemes? How are these different and similar across the three participating sites?</p> <p>What changes occur to established practices in order to adopt telecare/telehealth (in terms of different professionals own work practices and the overall division of labour?)</p> <p>Does telecare/telehealth improve productivity of key professionals such as community matrons?</p>	<p>45 participants &amp; informal carers</p> <p>15-30 non-participants</p> <p>75 health &amp; social care professionals</p>



## Theme 5

<b>THEME 5</b>	<b>OVERALL AIM OF EVALUATION THEME</b>	<b>NO. PARTICIPANTS REQUIRED</b>
<p><b>Qualitative study of organisational issues.</b></p> <p><i>What organisational factors facilitate or impede the sustainable adoption and integration of telehealth/telecare?</i></p>	<p>To assess how the whole system working is perceived and enacted and how inter/intra organisational contact and styles of collaboration change during the programme. It will also seek to understand how professionals cope with organisational change and how their roles and beliefs impact on the spread of innovation. It will look at how large scale change programmes influence organisational and individual professional identities.</p>	<p>45 key WSD managers and commissioners in health &amp; social services</p> <p>Staff from 3 WSDAN sites</p> <p>Staff from 3 non WSD related sites</p>



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# The Evaluation Team

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**Evaluation partners)**