What works for frailty in primary care?

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Healthy Ageing Collaborative: Vision

Organisational & clinical processes

Engaged, informed individuals & carers

Person-centred, coordinated care

Health & care professionals committed to partnership working

Commissioning
Evidence based organisational & system processes

- **Cumulative deficit model frailty**

- **Routine frailty identification recommended in international consensus guidance...**

- **CGA gold standard: resource intensive**

- **Simple interpretable tests:**
  Gait speed/TUGT/PRISMA7 = high sensitivity; low specificity

- **UK GP EHR Systems:** Read codes used to categorise & log multiple patient characteristics

- Symptoms, signs, laboratory test results, diseases, disabilities & social circumstances

- A simple & powerful mechanism for identifying cumulative deficits to recognise & grade the severity of frailty

- Done without extra resource i.e. captured as part of routine care
Development & Validation of the eFI
(NIHR Y&H CLAHRC funded research)

Existing EHR ("SystmOne")

Read Codes (>80,000 ➔ 8,000 ➔ 2,200)

Read codes map onto 36 ‘DEFICITS’

Tested in ResearchOne (n=454,711 ≥65y)

S1 Internal Validation Process (n=227,063 ≥ 65y)

THIN Ext. Validation Process (n=500,000 ≥ 65y)
eFI: 36 deficits (> 2200 Read codes)
### eFI Validation

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Mild frailty (HR, 95% CI)</th>
<th>Moderate frailty (HR, 95% CI)</th>
<th>Severe frailty (HR, 95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 yr care home admission</td>
<td>2.00 (1.68 to 2.39)</td>
<td>2.70 (2.41 to 3.04)</td>
<td>5.94 (4.61 to 7.64)</td>
</tr>
<tr>
<td>3 yr care home admission</td>
<td>1.52 (1.37 to 1.69)</td>
<td>2.70 (2.41 to 3.04)</td>
<td>3.42 (2.84 to 4.12)</td>
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<tr>
<td>5 yr care home admission</td>
<td>1.56 (1.43 to 1.70)</td>
<td>2.34 (2.10 to 2.61)</td>
<td>3.00 (2.42 to 3.70)</td>
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<tr>
<td>1 yr hospitalisation</td>
<td>1.85 (1.81 to 1.88)</td>
<td>2.96 (2.90 to 3.02)</td>
<td>4.62 (4.50 to 4.74)</td>
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<tr>
<td>3 yr hospitalisation</td>
<td>1.71 (1.69 to 1.73)</td>
<td>2.54 (2.51 to 2.58)</td>
<td>3.64 (3.57 to 3.70)</td>
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<tr>
<td>5 yr hospitalisation</td>
<td>1.63 (1.61 to 1.64)</td>
<td>2.43 (2.40 to 2.46)</td>
<td>3.59 (3.54 to 3.65)</td>
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<tr>
<td>1 yr mortality</td>
<td>1.91 (1.78 to 2.04)</td>
<td>3.39 (3.15 to 3.65)</td>
<td>5.23 (4.73 to 5.79)</td>
</tr>
<tr>
<td>3 yr mortality</td>
<td>1.74 (1.68 to 1.81)</td>
<td>3.02 (2.90 to 3.14)</td>
<td>4.56 (4.29 to 4.84)</td>
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<tr>
<td>5 yr mortality</td>
<td>1.66 (1.62 to 1.71)</td>
<td>2.73 (2.64 to 2.81)</td>
<td>3.88 (3.68 to 4.09)</td>
</tr>
</tbody>
</table>

[http://ageing.oxfordjournals.org/content/early/2016/03/03/ageing.afw039.full](http://ageing.oxfordjournals.org/content/early/2016/03/03/ageing.afw039.full)
Primary care eFl survival plots

Proportion alive

Time

Supported self-management
Case & Support Planning
Case Management/EoL care

Fit
Mild frailty
Moderate frailty
Severe frailty

5 yrs
Leeds Intelligence Hub
Identifying Frailty Cohorts

Top 2% (CPM)
1,668 (25.7%)

Top 2% (Count LTCs)
1,154 (17.8%)

Top 2% (eFI)
1,461 (22.5%)
818 (12.6%)
575 (9.9%)
175 (2.7%)
Cohort Comparison

Community Healthcare Contacts

Outpatient appointments

Unplanned A&E attendances

Inpatients: Discharges

Frequent Flyers (20% mortality rate)

85 years + (34% mortality rate)

Frail patients (25% mortality rate)

4 + LTCs (31% mortality rate)

Top 2% Risk of admission (29% MR)
eFI Engagement

http://www.improvementacademy.org/improving-quality/efi-engagement.html

NICE 56: Multimorbidity guideline (2016)
eFI Field Testing

• Further develop to optimise use in EHR systems:
  - Vision launch
  - Population & patient level reporting function

• Engagement with tool greatest where **clinical judgement** used in conjunction to stratify practice based populations

• Acknowledge eFI **not diagnosing frailty** but identifying those at risk

• **CCG IT infrastructure**: capability for data linkage/population level analysis e.g. Sussex CPM

• **eFI reliability and data quality**:
  - Communication processes which ensure GPs are informed of service use
  - Consensus locally as to deficits less well coded & select codes to use to improve coding
  - Choose codes which will support actions/referral

  e.g. Xa80x (unable to manage stairs) or Xa8Jx (unable to transfer)
Evidence Based Commissioning

Effectiveness Matters

January 2015

Recognising and managing frailty in primary care

- Frailty is a distinct health state where a minor event can trigger major changes in health from which the patient may fail to return to their previous level of health
- Simple tests with high sensitivity for frailty are gait speed, the timed up-and-go test and the PRISMA 7 questionnaire
- Comprehensive geriatric assessment is essential in the management of moderate to severe frailty
- Exercise programmes, particularly high intensity interventions, may improve gait, balance and strength and have positive effects on fitness
- Supported self-management can improve health outcomes. However, the value of case management has still to be proven

Evidence Briefing

Improving outcomes for residents of care homes

May 2016

Key messages

Providers of care in care homes should:
- ensure stable leadership and clear strategy of overall system
- use of specific models of care can have benefit
- do not neglect long term population strategies to support healthy ageing and prevent increasing disease burden
- support the development of relationships between care homes and service providers, and ensure clear lines of responsibility

Commissioners of old peoples’ services should:
- commission targeted training for staff
- ensure evaluation and monitoring is fed back for continuous improvement

Background

Approximately 400,000 people live in care homes in England, a large proportion of whom have restricted mobility, dementia, incontinence and other medical issues. There are three times as many beds in care homes (both residential and nursing homes) as there are in National Health Service (NHS) hospitals.

How care homes work with health and social care services (and vice versa) is an important indicator of system integration. Historically, integration has been poor with marginalisation from NHS services, particularly those that offer specialist expertise in dementia.

http://www.improvementacademy.org/tools-and-resources/evidence-briefings.html
Community interventions

<table>
<thead>
<tr>
<th>Study context</th>
<th>Not living at home N=79578</th>
<th>Death N=93754</th>
<th>Nursing home admission N=79575</th>
<th>Hospital admission N=20047</th>
<th>People with falls N=15607</th>
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</thead>
<tbody>
<tr>
<td>Geriatric assessment of general elderly people</td>
<td>0.95 (0.93 to 0.98)</td>
<td>1.00 (0.98 to 1.03)</td>
<td>0.86 (0.83 to 0.90)</td>
<td>0.98 (0.92 to 1.03)</td>
<td>0.76 (0.67 to 0.86)</td>
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<tr>
<td></td>
<td>35.3%</td>
<td>39.7%</td>
<td>47.5%</td>
<td>61.4%</td>
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<tr>
<td>Geriatric assessment of elderly people selected as frail</td>
<td>1.00 (0.87 to 1.15)</td>
<td>1.03 (0.89 to 1.19)</td>
<td>1.01 (0.83 to 1.23)</td>
<td>0.90 (0.84 to 0.98)</td>
<td>0.99 (0.89 to 1.10)</td>
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<tr>
<td></td>
<td>43.3%</td>
<td>0</td>
<td>28.8%</td>
<td>11.0%</td>
<td>0</td>
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<tr>
<td>Community-based care after hospital discharge</td>
<td>0.90 (0.82 to 0.99)</td>
<td>0.97 (0.89 to 1.05)</td>
<td>0.77 (0.64 to 0.91)</td>
<td>0.95 (0.90 to 0.99)</td>
<td>0.82 (0.61 to 1.08)</td>
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<td></td>
<td>2.2%</td>
<td>5.2%</td>
<td>0</td>
<td>57.0%</td>
<td>40.3%</td>
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<tr>
<td>Fall prevention</td>
<td>0.86 (0.63 to 1.19)</td>
<td>0.79 (0.66 to 0.96)</td>
<td>1.26 (0.70 to 2.27)</td>
<td>0.84 (0.61 to 1.16)</td>
<td>0.92 (0.87 to 0.97)</td>
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<td>0</td>
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<td>0</td>
<td>0</td>
<td>65.8%</td>
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<tr>
<td>Group education and counselling</td>
<td>0.62 (0.43 to 0.88)</td>
<td>0.80 (0.42 to 1.55)</td>
<td>0.50 (0.05 to 5.49)</td>
<td>0.75 (0.51 to 1.09)</td>
<td>n/a</td>
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<td>0</td>
<td>0</td>
<td>n/a</td>
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<tr>
<td>All complex interventions</td>
<td>0.95 (0.93 to 0.97)</td>
<td>1.00 (0.97 to 1.02)</td>
<td>0.87 (0.83 to 0.90)</td>
<td>0.94 (0.91 to 0.97)</td>
<td>0.90 (0.86 to 0.95)</td>
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Beswick Lancet 2008
eFI Implementation Examples
West London CCG Whole Systems Model of Care

1. Shared Care Plan for health & social needs - SystmOne
2. Tier 0: Over 65s mostly healthy
3. Tier 1: Over 65s with well managed LTCs
4. Tier 2: Over 65s at risk, under monitoring
5. Tier 3: Over 65s with complex needs

- Users empowered for self-care
- Health & Social Care Assistants (HSCAs)
- Case Managers (CMs)
- Community Independence Service (CIS)

- Named GP with clinical responsibility
- Tailored increase in resources for primary care for over 65s e.g., longer appointments, enhanced workforce, enhanced IT

- Home
- GP Practice
- Practice Network
- North / South Hub
- Major Hospital

- Pharmacy
- Podiatry
- OT & Physio

- Adult Social Care (ASC)
- CMs, HSCAs and GPs
- Geriatrician
- CIS
- Third Sector Age Uk Open Age

- Hub Admin & IT SystmOne WSIC Module
- Diagnostics
- Intermediate (Cardio/Resp – Mental Health)
- Supports 20+ practices

- Voluntary services
- Learning disabilities
- Housing & Benefits
- End Of Life
- Pharmacy
- Continuing care
- North & South Hubs
- Acute Elective Specialist
- 999, CIS, LAS, OOH, UCC
- Acute NEL

- Staff/Teams – A Service Culture of Integration: moving towards a single organisation
- Financial Integration: capitated budgets, aligned financial incentives
- Systems and Operational Integration: integrated IT and robust legal and governance arrangements
Proactive Falls Prevention: Leeds South & East CCG

- 97 pts; eFl score=0.25; aged >65
- ALL patients on at least one medication that could contribute to falls
- Mean number meds 10 per patient (range 3-24)
- 27% patients fracture aged ≥50 yrs

- 61% telephone screened for falls risk
- Of these, 65% (n=39) fallen/stumbled in last 12 months
- But only 22% patients had a fall documented in their EHR

Practice based falls prevention intervention:
- A lying & standing blood pressure measurement
- A GP led mini medication review
- Health promotion related to falls prevention and/or
- Onward referral
First PDSA

- 20 patients invited in for falls prevention intervention
- 27% had evidence of significant lying/standing BP drop
- 90% required interventions to reduce their falls risk

Falls Action Plan Interventions

Challenges for scaling up
- Resources to deliver
- Process measures definable but challenges measuring impact on falls
- CCG direction: falls prevention but not in isolation
- CHC/linked data sets: ? can we better target falls prevention & does the data exist to support evaluation?
NHS HaRD CCG: STOPP supported medication reviews care home residents

- 22 residents nursing home registered with practice
- All residents had an eFI score indicating frailty risk

Results:
- **STOPP alerts 15/22 patients**
- Overall 5 drugs stopped completely
- 8 dose reductions
- 7 drugs continued

Follow up audit 2 months later:
- No adverse outcomes reported
- No meds restarted nor doses increased
- 3 further dose reductions/meds stopped
- 2 pts reported symptom improvement (e.g. less dizziness with lower dose of night sedation)

NHS Vale of York CCG: Cost Consequence Analysis

<table>
<thead>
<tr>
<th>Aims</th>
<th>Measure</th>
<th>Time frame</th>
<th>Method of collection for intervention group</th>
<th>Method of collection for control group</th>
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</thead>
<tbody>
<tr>
<td>Improved quality of medication review</td>
<td>Number of inappropriate medications stopped</td>
<td>Number and type of medicines at baseline and at 1, 3, 6 and 12 months</td>
<td>Record on clinical template which populates the “view”</td>
<td>Through cost template*</td>
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<tr>
<td></td>
<td>Practitioner surveys</td>
<td>Pre and post intervention</td>
<td>Qualitative questionnaires from AHSN</td>
<td>Qualitative questionnaires from AHSN</td>
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<tr>
<td></td>
<td>Patient stories</td>
<td>Pre and post intervention</td>
<td>From qualitative questionnaires from AHSN</td>
<td>From qualitative questionnaires from AHSN</td>
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<tr>
<td></td>
<td>Onward referrals</td>
<td>Baseline then 1, 3, 6, and 12 months post implementation</td>
<td>Collect though clinical “view”</td>
<td>Collect through clinical “view”</td>
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<td></td>
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<td>Cost template*</td>
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<tr>
<td>Improved holistic approach</td>
<td>Number of inappropriate medications stopped</td>
<td>As above</td>
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<td>Patient stories</td>
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<td></td>
<td>Practitioner surveys</td>
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<tr>
<td>Reduction in drug burden</td>
<td>Number of inappropriate medications stopped</td>
<td>As above</td>
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<td></td>
<td>Patient stories</td>
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<td>Practitioner surveys</td>
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<tr>
<td>Reduction in inappropriate prescribing and high risk prescribing</td>
<td>Number of inappropriate medications stopped</td>
<td>As above</td>
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<tr>
<td></td>
<td>Number of high risk medications stopped</td>
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<td>Practitioner surveys</td>
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<tr>
<td>Reduction in admissions –</td>
<td>Number of hospital admissions including 111 contact, ED attendances and GP admissions</td>
<td>Baseline and at 3, 6, and 12 months post implementation</td>
<td>captured on clinical “view”</td>
<td>captured on clinical “view”</td>
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<td></td>
<td>Number of GP consultations</td>
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<td></td>
<td>Number of out of hours consultations</td>
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<td></td>
<td>Number of nurse consultations</td>
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<td>Improve knowledge and skills of primary care teams</td>
<td>Practitioner surveys</td>
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<td>NHS Organisation</td>
<td>Operating in a cluster capacity?</td>
<td>Practice List Pop.</td>
<td>% SystemOne Coverage</td>
<td>STOPP/Start Criteria Awareness (High; Medium; Low)</td>
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<td>----------------------------------------</td>
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<tr>
<td>Leeds North CCG</td>
<td>Y</td>
<td>211,944</td>
<td>77%</td>
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<td>Leeds South &amp; East CCG</td>
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<td>257,000</td>
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<td>Wakefield CCG</td>
<td>N</td>
<td>354,669</td>
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<td>155,793</td>
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<td>Harrogate &amp; Rural Districts CCG*</td>
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<td>159,534</td>
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<td>Hambleton Richmond Whitby, CCG</td>
<td>*Harrogate Host</td>
<td>141,736</td>
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<td>Vale of York CCG</td>
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<td>Scarborough &amp; Ryedale CCG</td>
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<td>118,024</td>
<td>n/a</td>
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</table>
Systematic medication reviews for people with frailty in primary care

- Health Foundation I4I Round 5 application – starts Jan 2017
- Partnership with Harrogate & Rural Districts CCG
- **12 primary care project teams**
  - Teams will receive patient safety & QI training (TAPS) which will incorporate tools to support behaviour change
- Interventions based on established evidence for de-prescribing i.e. **STOPP/START** criteria

**Aims:**
- Reduce inappropriate prescribing
- Prevent medication errors
- Reduce healthcare utilisation

SAFER PRESCRIBING FOR FRAILTY
PART OF THE MEDICINE OPTIMISATION PROGRAMME
Patient identified with Mild/Moderate/Severe Frailty using screening tool (eFI)

Assessment by Practice Nurse with additional training using a MCGA Template

Medicines reconciliation using START/STOP Tool by GP or Pharmacist

Social Services and Third Sector

Secondary Care

Community Services
Metrics:

- Patient Satisfaction and Quality of Life (SF-36)
- Recognition and diagnosis of frailty – (proxy indicator is increased prevalence in the number of patients with a read code of Frailty)
- Changes in primary care utilisation
- Changes in Out of Hours use
- Changes in avoidable unplanned admissions
- Changes in A&E attendances
- Changes in Secondary Care referrals (likely to be an increase in referrals for the Hot Clinic/Elderly Psychiatry/Falls)
- Changes in Social Care referrals
- Changes referrals to VCS
- Evidence of de-prescribing amongst patients with a frailty diagnosis

Evaluation timeline: Baseline (6 months before mCGA), 6 & 12 months
Patient Satisfaction

"I don’t like all the paperwork, but excellent care from the Doctors and other staff."

"(The visit) highlighted problems that may otherwise be considered not worth bothering with."

Having someone with medical knowledge and access to other professionals to visit is preferable in some instances to visiting a surgery. For people in my age group with a variety of ailments, mostly age related, taking up a Doctor’s time is a serious consideration..."
Engagement of people with frailty & their carers

- **Frailty Oversight Group (FOG):** PPI steering & sign posting; linked to NIHR CLAHRC Y&H Frailty programme e.g. importance of appropriate frailty language as part of implementation

- **GP Practice Patient and Public Involvement Groups:** useful resource e.g. written communications to be sent to patients

- **Use trusted language & patient stories** e.g. ‘Health Checks’ [for older people]

- **NIHR Y&H CLAHRC Communicating Frailty in Primary Care** qualitative research (See POSTER!). Next steps: Wider engagement primary care clinicians to decide on & co-produce tools to support communication
GP Feedback

- House bound patients being seen at home
- Increased identification of frailty, falls, AF and dementia
- More considered approach to medications reconciliation
- Not sure if the patients understand they are being cared for in a different way – but they do like seeing the nurses and appreciate things being sorted
- It seems to be identifying significant unmet need
- We need to develop a protocol for ongoing management of these patients
- Nurses are now doing assessments which they didn’t do previously – depression, cognitive assessments etc.
- Identified the need to streamline how we [GPs] refer – we need a single point of access
- Interventions for managing early frailty are not in place in the wider system
- Much more detailed assessment & referral onto the appropriate AHPs.

Identified the need to streamline how we [GPs] refer – we need a single point of access
Mild Frailty Offer?

- Examples of supported self management interventions for people with frailty exist - different populations, approaches
- Hard to find evidence of impact
- Focus groups with older people with eFI mild frailty: barriers and enablers exist as they try to age more healthily
- Different levels of support may be required; not necessarily a clinician
- Iterative design of SMS intervention for mild frailty population
- Health Foundation I4I funding to test feasibility of intervention in partnership with GP Practice & Age UK in Bradford

Health & care professionals working in partnership

Primary care only one part of the whole

- Increased unmet need identified = potential for constraints or unintended consequences in system e.g. capacity issues, duplication in system (i.e. HOT clinics)

- Offers opportunity for whole system change

- Need a mechanism for this across the whole frailty care pathway

- Partnership working: commissioners, secondary care, primary care, community services, social care, local authority, public health, voluntary sector
In Summary...

- **eFI** identifies those at risk of frailty
- Clinicians & CCGs are using eFI to enable frailty recognition & diagnosis & implement proactive evidence based new models of care
- **Primary care staff enthusiastic** about new ways of working for people with frailty
- **Collective confidence** that early identification and more proactive primary care for people living with frailty is right thing to do
- **Challenges exist**: evaluating complex interventions
- More work needed if we are to **demonstrate impact**
Contact Details

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#Frailty2015