Enabling Adult Social Care Transformation

‘Big Data’ informing people focused pathways

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The Key Factors of our Transformation Project

• We are **improving outcomes** for our citizens, making better use of the Derbyshire £

• We are using “**big data**” insights to lead service transformation through:
  – cultural change & collaborative working
  – organisational development
  – Integrated information infrastructure

• As the **first whole system** in the country to integrate this breadth of health and social care data, we now understand **flow**
Derbyshire Care & Health System

**Acute Trusts:**
- Derby Teaching Hospitals NHS FT
- Chesterfield Royal NHS FT

**Community /Mental Health Providers:**
- Derbyshire Healthcare NHS FT
- Derbyshire Community Health Services NHST

**Other Healthcare Providers:**
- East Midlands Ambulance NHST
- Derbyshire Health United (111 & out of hours services)

**Social Services:**
- Derby City Council
- Derbyshire County Council

**Commissioners:**
- Southern Derbyshire CCG
- North Derbyshire CCG
- Erewash CCG (Vanguard)
- Hardwick CCG

12 organisations collaborating across the health and social care system
Case Studies

Falls – pathways, audit and prevention

The issue at hand

Falls are a significant determinant of the morbidity and mortality of older and elderly individuals. They impact on all components of the health and care systems and as such, falls prevention is high on each organisation’s agenda. Locally we have a falls service in place which will be developed working with local experts, while in other areas, more community-focused referral routes for those who have fallen are being adopted. Identifying those at risk of falls and setting up fracture prevention services for older people have been found to reduce hospital admissions and the need for social care, such as admission to a care home (Department of Health, 2009). Key points from successful intervention programmes include:

- Strength and balance training
- Home hazard assessment and intervention
- Vision assessment and referral
- Medication review with modification/withdrawal.

(NICE, 2013)

It is generally regarded that the health and care needs of an ageing, frail population will be complex. However, unless they are being explored on a case by case basis it is difficult to visualise the breadth of complexity for that population group as a whole. This in approach offers a solution.

The pi intervention

Using the Pi system we have already discovered a costly cohort of fallers known in an outpatient setting prior to crisis that results in them admitted in an emergency via the A&E department. Taking the characteristics of this cohort derived from the system: their demographics, social care needs, known long-term conditions, multiple outpatient attendance, registered GP practice; an audit has been undertaken at Royal Derby Hospital to explore their broader levels of care and circumstance, and opportunities to prevent such episodes occurring in the future.

The impact

There is the potential to ensure a robust, evidence-based approach to additional falls prevention opportunities for older people, with the aim of reducing hospital admissions and the need for social care. In addition to admission to a care home, and ultimately improved health and wellbeing. Given the remit of the East Midlands Clinical Senate Advisory Group, there is also scope to feed any local intelligence that we may unearth into region-wide discussions on commissioning of services for an ageing population and those living with frailty. Locally, frail elderly assessment tool (FEAT) data is now being processed into the Pi system and can be used to inform this analysis. A recent evaluation has offered some positive results for those in recent of FEAT care.
1. Improving outcomes for our citizens

• Healthy Housing
  – Clients with a history of falls receiving support from the HHH saw a reduction in emergency hospital admissions of 53.8% in the six months post intervention, compared to a control group with little change. Out of 1,000 people this would save the local economy £588,034.
1. Improving outcomes for our citizens

Frail Elderly Assessment Team (FEAT)

Aim of the data analysis: To understand whether the provision of FEAT impacts on future service use by using the pi database and analysis tool.

Findings:

- Service usage increases for both FEAT and control patients over 6 months, however...
- Data analysis suggests that FEAT maintains a reduction in service use up to 6 months post intervention
- Data suggests that service usage increases particularly for A&E attendances and emergency inpatient admissions in the control group compared to FEAT patients
2. Leading Service Transformation

• Collaborative leadership and system-wide working from Chief Officers to frontline practitioners
• Virtual intelligence resource embedded in system-wide Transformation Programme Office
  – Efficiency gains in tackling big questions
  – Quarterly meetings of clinical, operational and strategic leads
• Holistic view of the patient/service user pathway
• Using the system to inform design and transform front-line services
2. Leading Service Transformation

• Promoting cultural change- nurturing whole system working and learning at multiple levels and specialties

• Coordinated by Public Health
  – Specialist, independent expertise with good links across the sector

• A growing community of interest comprising trained information and intelligence officers developing skills in whole system data use through:
  – masterclasses,
  – competency building and information exchange
  – support from PI Ltd, including visits and webinars.
Extending our work across other areas

- The following areas of work are currently being explored:
  - Children’s Health, including Autistic Spectrum Disorder
  - Primary Care data (subject to IG requirement)
  - Workforce development around needs of patients
  - Evaluation of clinical pathways, especially the impact of interventions e.g. leg ulcers
  - Working with other partnerships e.g. Leicester, Leicestershire & Rutland
  - Care homes, including impact of demographic change, admission avoidance and support for discharge.
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A demonstration of the reporting dashboards we’ve used to interrogate data
Understanding Flow through data integration

- An understanding of FLOW across the system: plan better and cope better by knowing how and when services are used, and by whom
- Integrated 3 years of individual service user data (pseudonymised); refreshed on a monthly basis
- Partnership: Health and Social Care community; Commissioning Support Unit; PI Ltd. working collaboratively
- Timing – alignment with other national agendas including, Better Care Fund programme, and wider Integration agenda.