East Riding of Yorkshire

Development and implementation of a Falls Pathway - modelling and implementation of diversionary pathways

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The best health, the best health care, a health service fit for the East Riding of Yorkshire

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Aim of this presentation

- The development and implementation of a falls pathway for the NHS East Riding
- Falls diversionary scheme
- Neighbourhood Care Teams for long term condition management
- NHS Institute's Scenario Generator Tool
- Impact assessment of diversionary pathways

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Local Challenges

- Demography
  - 1000 square miles
  - Rural
  - Transport challenges
- Aging Population
  - Greater rate than national average
  - 6% year 2 growth, 11.5% year 5 growth, 7.4% year 10 growth
  - Nationally by 2025 over 60+ set to double to 1.2 billion
  - Increasing long term conditions
- Economic situation; driving quality and value

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Local Data

National data	East Riding of Yorkshire PCT Practice population
A third of the population over the age of 65 has a fall	25,358 people
15% of the over 65 fall more frequently	3,180 people
42% of people aged 75 years and over will attend an A&E department with a falls related injury	6,157 people
35.4% of those who attend A&E will be admitted to hospital.	2,186 people

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A Challenge for the NHS

- Around 160 people each year die as a result of falls
  - 1:5 fallers → medical attention
  - 1:40 fallers → hospitalised
  - 30% of over 65s living in community fall / year
  - 60% of nursing home residents fall / year
- Financial & resource implication

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Our Journey Influences

- NSF for older people (2002) –underpinned the development
- NICE guidance for falls (2004)
- NHS York and Humber Healthy Ambitions guidance on falls (2010)
- Strategy for falls 03/10, unscheduled care developed 05/06
- Integrated Service Improvement (ISIP)
  - National Demonstrator site Jan-Nov 07
  - Falls diversionary pathway
- Community Services Commissioning Strategy (Unscheduled care, elective and diagnostics, community hospitals)
  - Consultation phase-Nov 06 –March 07
- Falls diversionary pathway –one scheme in the model along with Neighbourhood care teams for admission avoidance
- QIPP –Quality, Innovation, Productivity and Prevention agenda (2009)
  - Key focus on shifting care to primary and community settings

Falls Pathway Model

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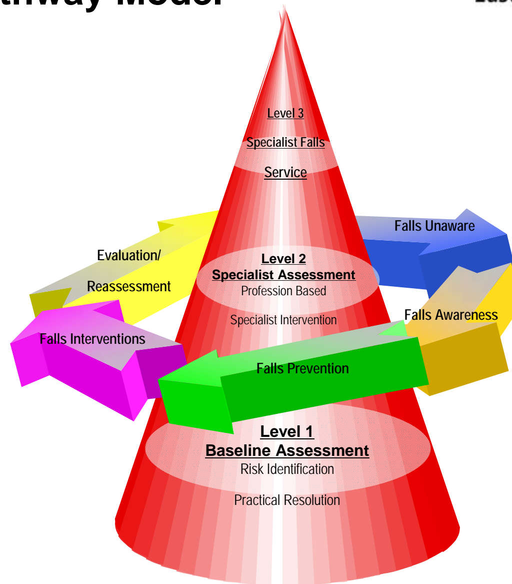

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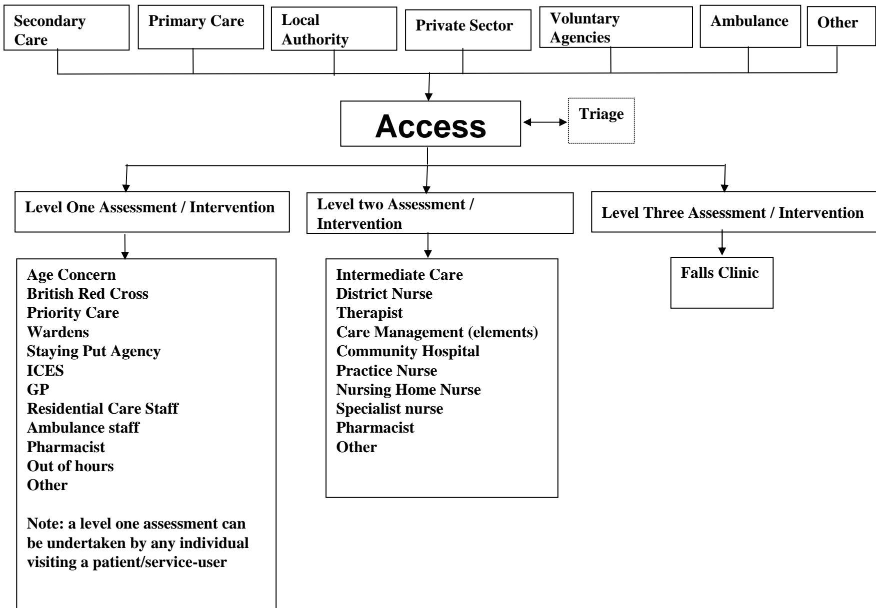

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Level One - Risk Identification Practical Resolution

- Basic Assessment - Initial point of contact for all new referrals for falls needs.
- Attempt to remedy risk factors, this may be moving loose rugs or recommending the purchase of appropriate footwear for the person.
- If these do not reduce the risk then it will be essential to move the person to a higher, more in depth level of assessment

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Level Two - Specialist Assessment

Will facilitate a more specific and specialist assessment undertaken by a professional such a Nursing or Therapist

A multi-factorial assessment may include the following:

- Identification of falls history
- Assessment of gait, balance and mobility, and muscle weakness
- Osteoporosis risk
- Functional ability, assessment of home hazards and fear relating to falling
- Assessment of visual impairment, cognitive impairment, neurological examination, urinary incontinence and cardiovascular examination
- Medication review.

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Level Three - Specialist / complex Assessment

- If the risk is not managed or reduced through level 2 of service then there is a need for a Specialist and Dedicated Falls Service which occurs at Stage 3.
- This is seen as the tip of the cone and if all people who have fallen are managed through the previous stages, in a robust manner, then numbers should be small.
- Positive patient feedback, evidence of reduction in frequent fallers (3/12 telephone triage – 98.4% had not fallen – 189 patients)

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Falls follow-up after A&E attendance

- Everyone aged 65 and over who attend A&E following a fall are followed up and triaged at home by telephone
- This involved undertaking a level one falls risk assessment which can be followed up by a home visit and home safety assessment

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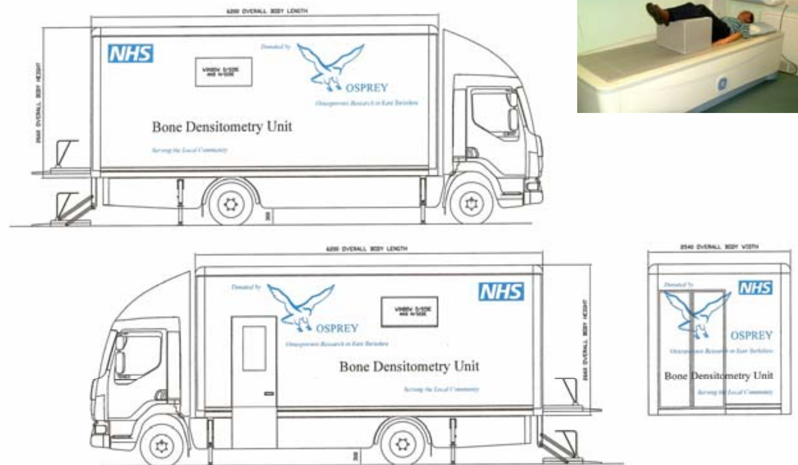
Bone Health



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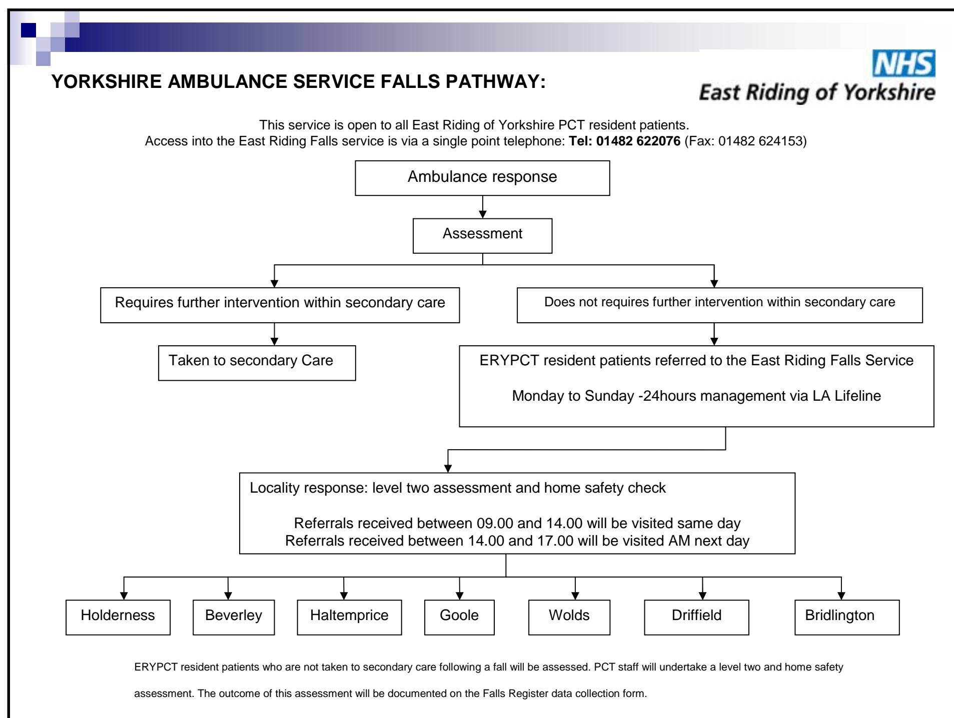
Diversionary Pathways

- In partnership with the Local Authority (Life-line control centre), community services and the ambulance service
- Prevents unnecessary trips and attendance at A&E following a fall
- Ensures effective follow up and prevent intervention in the individuals own home
- 32 diverted in a month – activity increasing



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Data assumptions underpinning the clinical

- Assessment of data -16.2% of emergency calls to ambulance service were due to a fall
- Upwards of 30% could be diverted from A&E
- 2008/9 1140 falls were admitted via ambulance to A&E, 18% (205) with a primary diagnosis of fractured neck of femur
- 19.8% (236) admitted with a length of stay < 2 days with no procedure
- Pilot the pathway for 4 months

Outcome – falls pathway

- Telephone triage at 3/12
  - Reduction in falls, GP and A&E attendance
  - Enhanced confidence & increased activity
  - Improvement in balance and gait
- Financial benefit
  - Local falls clinic has saved 1.3 million
  - A&E diversion has saved 43,560

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Involvement & partnership

- PCT provider (Community Services) staff –delivering pathway
- Yorkshire Ambulance Service (YAS) –Diversionary Pathway
- PCT commissioners –impact on investment
- Local Authority – home safety assessments and access to basic equipment
- Patients –benefits, safe in their own home – very positive feedback and evidence of significant reduction of frequent flyers
- Acute Trust –less activity in A&E
- GP's and Primary Care

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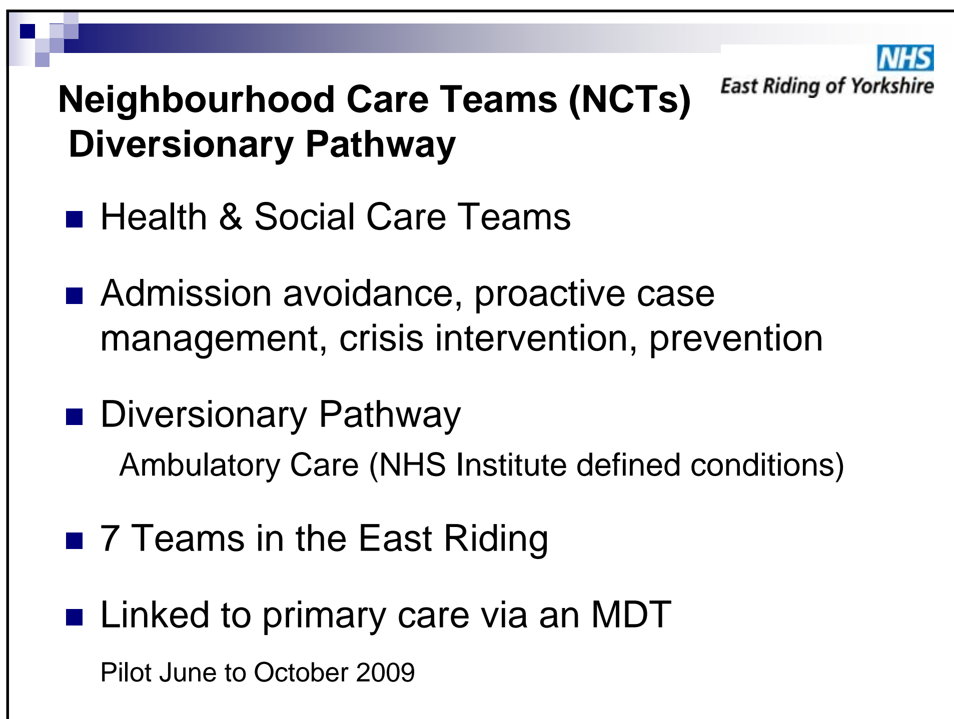
at home
Mrs. June Lovatt
The Green
Huggate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Neighbourhood Care Teams (NCTs)
Diversionary Pathway
Health & Social Care Teams
Admission avoidance, proactive case management, crisis intervention, prevention
Diversionary Pathway
Ambulatory Care (NHS Institute defined conditions)
7 Teams in the East Riding
Linked to primary care via an MDT
Pilot June to October 2009

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NHS Institutes Ambulatory Care Conditions:
Up to 49 clinical presentations can be managed in an ambulatory care manner

- COPD
- Angina
- Asthma
- Flu and Pneumonia
- Dehydration and gastroenteritis
- Cellulitis
- Diabetes without complications
- Pylenephritis
- Iron-deficiency anaemia
- Perforated/bleeding ulcer
- Dental conditions
- Gangrene
- Pelvic Inflammatory Disease
- Vaccine preventable conditions
- Nutritional deficiencies

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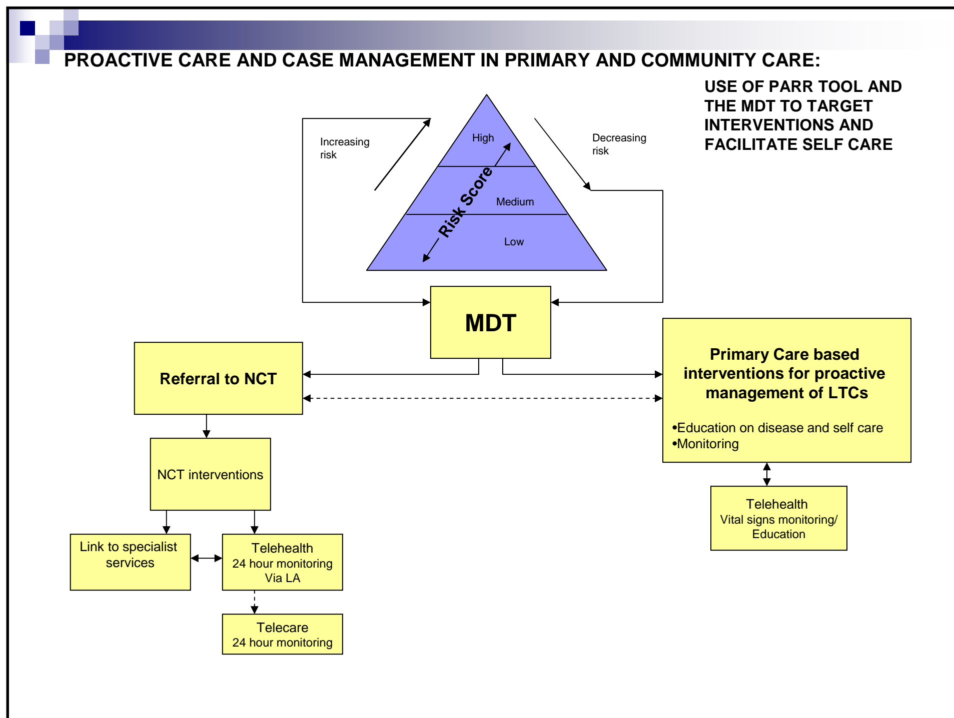
Impact of Neighbourhood Care Teams

- A significant reduction year on year in non-elective admissions in 2008/9 (-18%) and 2009/10 (-21%).
- Saving for the 8 months of the evaluation period of £392k and extrapolates to a full year saving of £589k.
- Further evaluation being undertaken to look at excess bed days



Proactive Case Finding Pilot

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Metric	Pilot Results	Annual effect
Number of patients proactively identified and referred onto community team	59	807
Number of new assessment undertaken	53	725
Number of new care plan created	41	560
Number of hospital admissions prevented	4	55
Number of GP consultations prevented	7	96

Feedback on the pilot for proactive case management by NCT's

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- Patients told us:
  'Its given me support & contact, meaning things can be dealt with quickly before treatment is required'
  'I now know who to contact and what to do myself if I have a problem'
- GP Practices told us:
  'It has facilitated the seamless delivery of health care by cross boundary working, avoiding service repetition to the patient'
- Neighbourhood Teams told us:
  'Monthly MDT team meetings within practices involving GP's, Community Matrons, practice nurses, district nursing and social care has enabled improved decision making and more appropriate interventions and care to patients'

Modelling & Simulation……

Simulation is…..

A technique that aims to imitate and represent a system, process or behavior for specific analytical, decision support or learning purpose

So why use simulation for strategic planning

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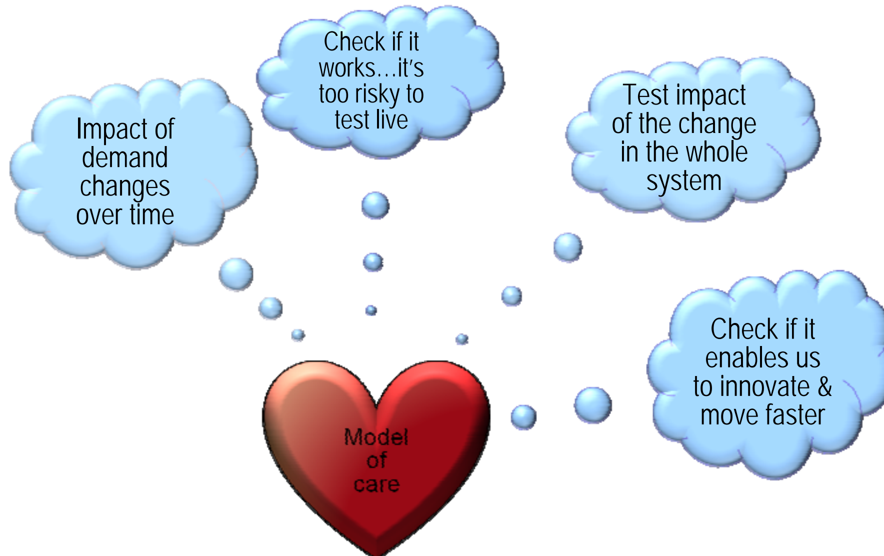

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The Scenario Generator Tool

A software tool developed by the NHS Institute comprising of 3 elements:

- A representation of a whole health and social care delivery system based on pathways of care
- A healthcare demand model
- A powerful simulation facility

Now marketed by Simul8

Scenario Generator the tool……

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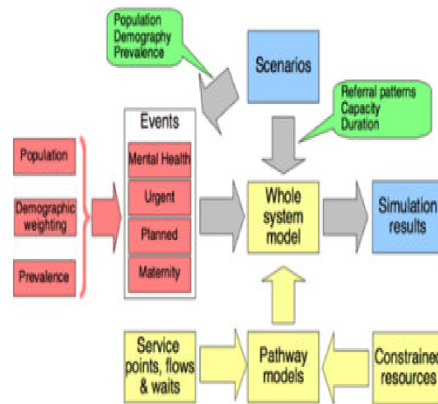

It is designed to -

- replicate the existing service in a health system
- develop scenarios that reflect changes in population, health prevalence, service configuration and models of care
- examine the impact of changes on flow, capacity, system delays and waits and cost across the whole system
- indicate where changes to one pathway might have impacts elsewhere in the whole system

How Scenario Generator has supported us..

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- Developing new patient pathways
- Informing capacity plans
- Exploring the effect of shifting care closer to home
- Anticipating the effect of population growth on services
- Testing assumptions in strategic plans
- Assessing the feasibility of new models of care
  - urgent care provision
  - diversionary pathways
  - community-based services

Our Modelled diversionary Pathways

- **Ambulatory care via NCTs**
- **Falls**

We've also modelled:

- Heart Failure
- Glaucoma
- Rheumatology
- Long Term Pain
- Multiple Sclerosis
- Parkinson's
- Epilepsy
- Headache/Migraine

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Falls Drivers for Modelling

Falls pathway was complete

Pilot –limited results in 4 months

Spend on falls and ambulatory care was £11m

Needed to create a 'case for change'

Cultural challenges to the new pathway

Disbelief by commissioners blocking investment

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Connecting opportunities: The Scenario Generator Pilot

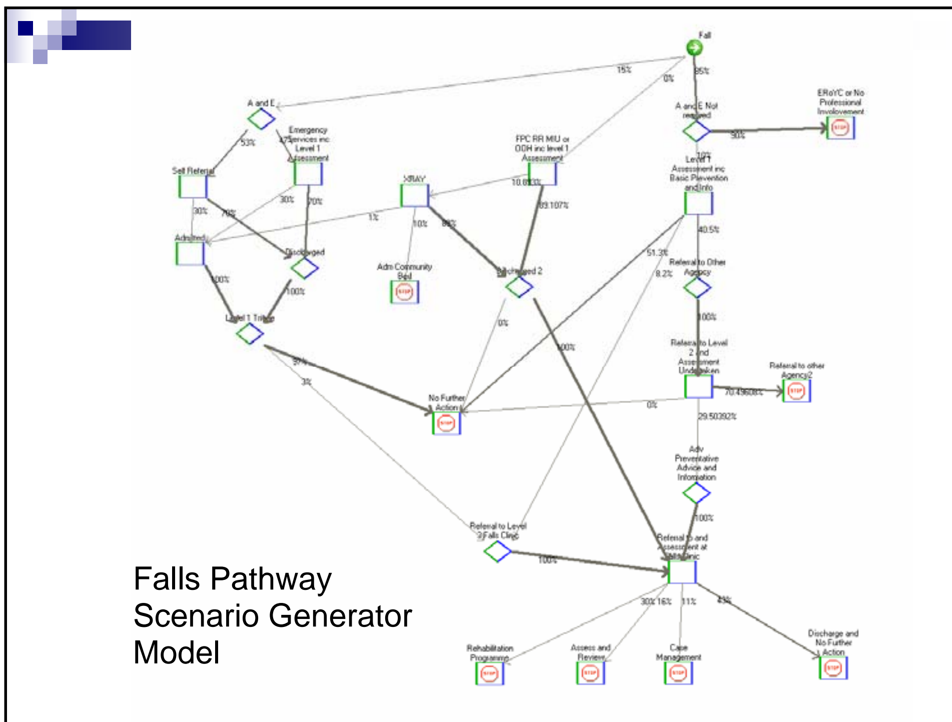
- NHS Institute for Innovation and Improvement were looking for sites to join a national study
- To validate the tool and identify areas for development prior to launch
- Locally we needed to address disbeliefs & dilemmas
- Ran a number of scenarios of proposed changes to test the impact of the falls pathway

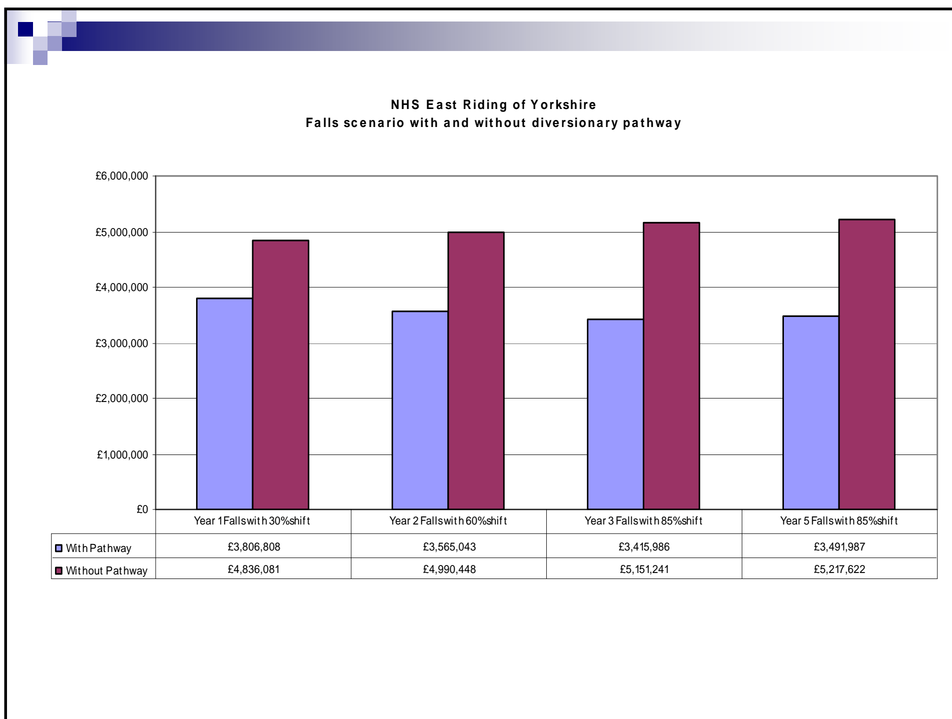
Its use to assess impact of the new falls pathway….

- Modelled
  - the activity and costs arising from falls in the current health care provision
  - the proposed new service of an ambulance diversionary pathway
- Assessed the impact of the ageing population
- Compared scenarios of increases in % diversion from A&E
- Identified
  - the costs and activity of the various steps in the existing and new pathway
  - Identified the potential efficiency gains

Underpinning data assumptions for modelling

- Current population of > 65ys is 63591
  - 1/3 suffer a fall (21197)
- Assumed 85% self care with 10% having a level 1 assessment
- 15% attend A&E (3180)
  - 54% self refer
  - 46% via ambulance
- Shifting 30%, 60% and 85% of A&E attendees to
  - A&E to community based integrated community services with x ray facility and beds
- Pathway included level 2&3


Falls Pathway
Scenario Generator
Model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Falls scenario with and without diversionary pathway
£6,000,000
£5,000,000
£4,000,000
£3,000,000
£2,000,000
£1,000,000
£0
Year 1 Falls with 30% shift
Year 2 Falls with 60% shift
Year 3 Falls with 85% shift
Year 5 Falls with 85% shift
With Pathway £3,806,808 £3,565,043 £3,415,986 £3,491,987
Without Pathway £4,836,081 £4,990,448 £5,151,241 £5,217,622

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The benefits of this approach..

- Greater understanding of the proposed pathway and patient flows
- Demonstrated the potential benefit of implementation
- Identify any likely workforce consequences
- Gave an indication of current costs of falls and the likely cost savings
- Greater confidence to the business planning process
- Confidence to apply Scenario Generator to other initiatives
  - Shift admissions due to ambulatory care into community
  - Shift in other planned pathways

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Challenges in using the tool…..

Tool set up	• Age specific pathways were not available in the tool • Complexity of pathway
Data collection & validation	• YAS and Provider data –manual trawl of data base • Designed a new data base to facilitate collection
Provider staffing & Service costs	• Limited community costs and tariffs available to use • Based on staffing costs, time to assess and other costs such as overheads
Shifting activity	• % diverts used in scenarios • No clear time frame to commission the new pathway and full unscheduled care model

Ambulatory care assumptions- Neighbourhood Care Teams

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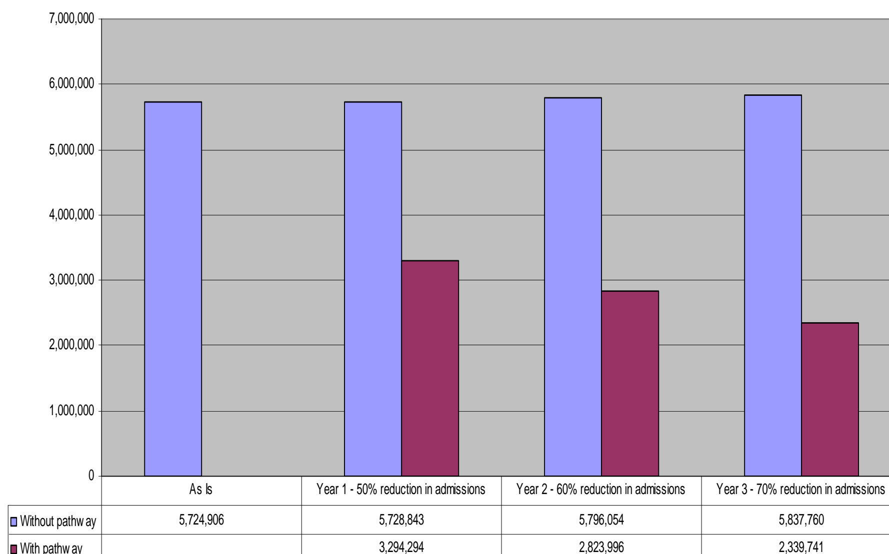
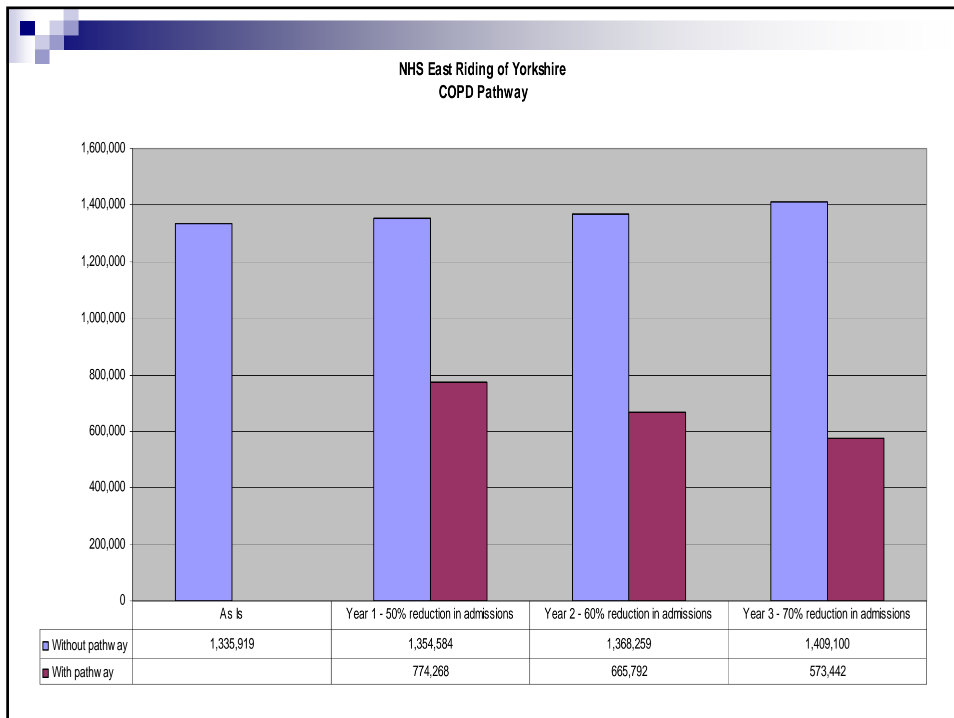
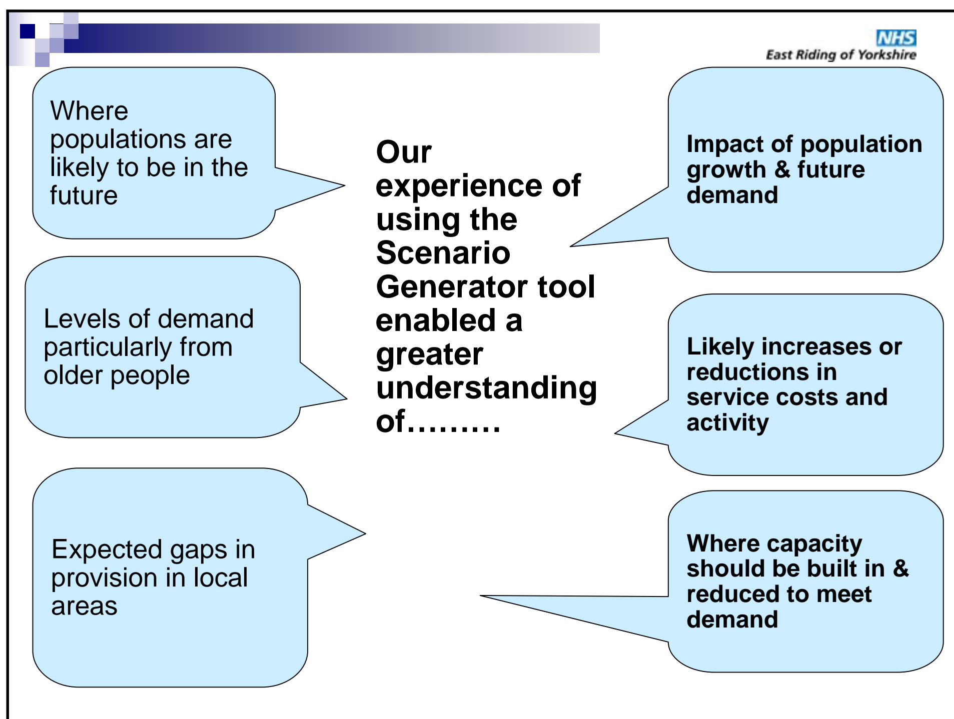
- Based on NHS Institutes conditions
  - All conditions 08/09 activity was 4309 episodes (COPD 723) at a total cost of £7m
  - Split by 7 NCT's
- Assumptions based on clinical work to determine community based package per avoided admission
  - Simple -3 visits, Moderate -5 visits and complex 7 visits
  - Modelled 50%, 60%, 70% and 80% shift as potential is for 100% to be managed in community
- Used the tool to
  - determine the total cost of a service
  - potential efficiency gain as compared to an admission



	As Is	Year 1 - 50% reduction in admissions	Year 2 - 60% reduction in admissions	Year 3 - 70% reduction in admissions
Without pathway	5,724,906	5,728,843	5,796,054	5,837,760
With pathway		3,294,294	2,823,996	2,339,741



	As Is	Year 1 - 50% reduction in admissions	Year 2 - 60% reduction in admissions	Year 3 - 70% reduction in admissions
Without pathway	1,335,919	1,354,584	1,368,259	1,409,100
With pathway		774,268	665,792	573,442



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Applying the outputs…

- Used to facilitate better questions
- Given greater insight to improve:
  - commissioning decisions
  - contracting discussions
- To initiate new service level agreements
- To demonstrate competency in being a World Class Commissioner (WCC)
- Identify potential productivity gains

Overall to improve patient outcomes