

Multimorbidity and Frailty JSNA Chapter

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Increase in older people and multimorbidity over next 10yrs

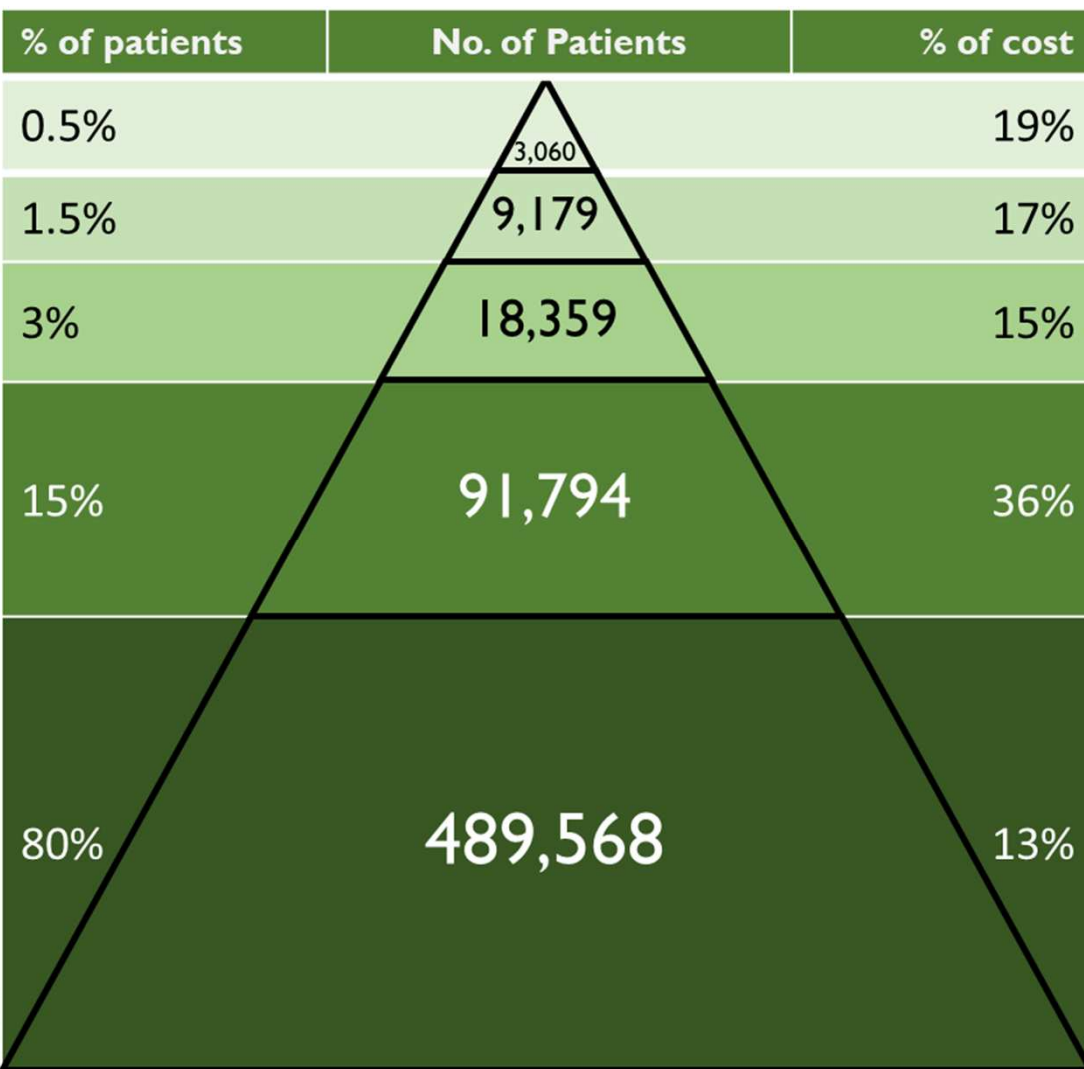
Projected population change of older people in Leicestershire (2016-2029)

	2016	2029	change	
65 years+	154,100	195,600	+ 41,500	+ 26.9%
75 years+	17,700	26,000	+ 8,300	+46.9%

Potential increase in multimorbidity of older people (2019-2029)

	2019	2029	change
65 yrs+ and multimorbid	14,317	22,660	+ 8,343
65 yrs+ and 8+ LTCs	3,747	5,931	+ 2,184

The Need for Health Care Varies – All Secondary Care Costs

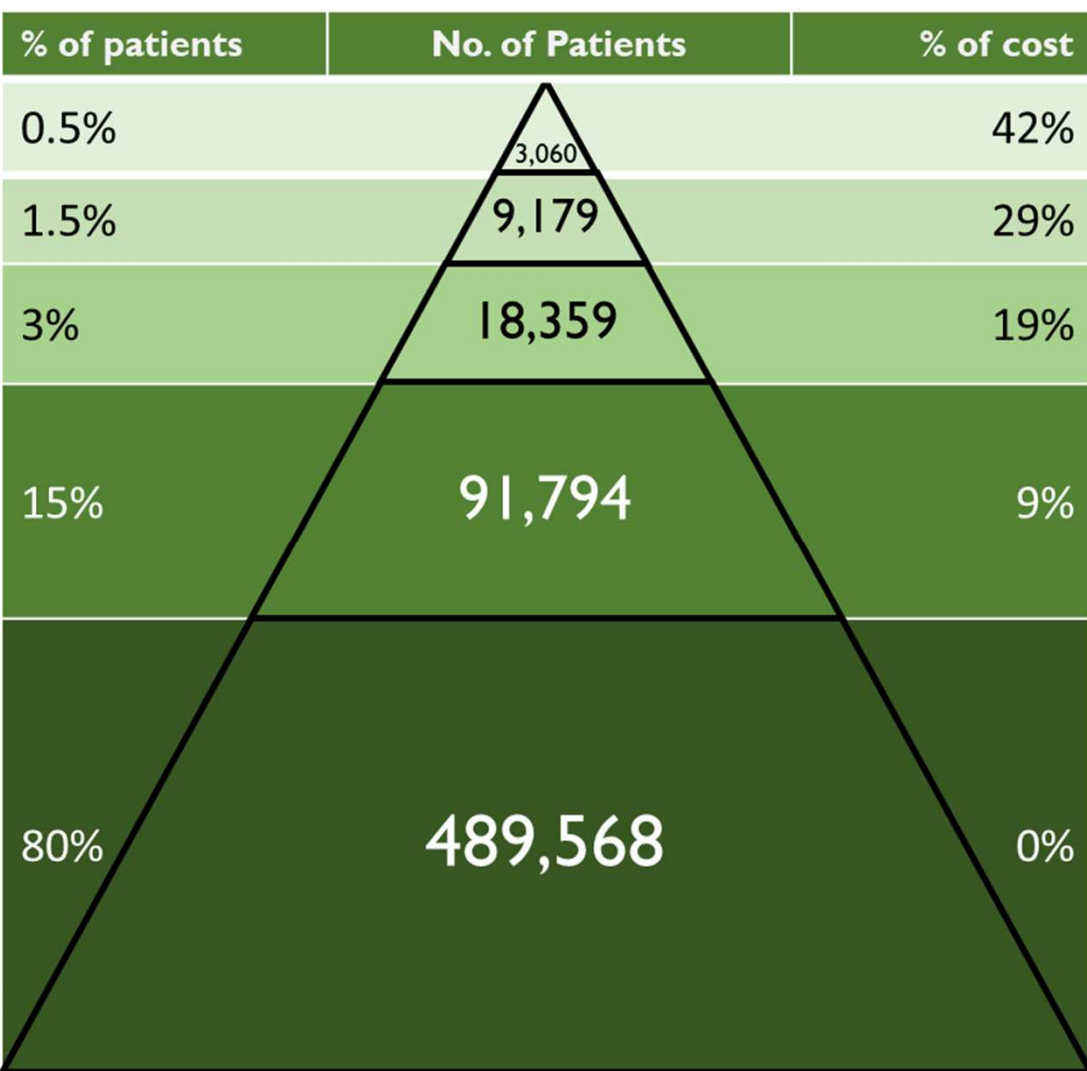


Just 0.5% of the population (3,250 people) in Leicestershire accounted for around a fifth (19%) of all secondary costs in the previous year

Around 5% of the population accounts for around half (51%) of all secondary care costs over a year.

At this time, no costs for pharmacy or primary care costs are included in the Leicestershire data but this could be added for later iterations of the reports

The Need for Health Care Varies – Emergency Admission Costs



A similar, but more pronounced, pattern is evident for emergency admission costs:

Here just 0.5% of the population of Leicestershire accounted for over two-fifths (43%) of emergency admission costs in the previous year

Overall, around 20% of the population of ELL CCG accounts for all the emergency admission costs over the previous year, and 80% of the population incur zero emergency admission costs.

High risk groups are not homogenous

The degree of overlap between these different cohorts or segments isn't as great as people have traditionally thought.

Therefore need to think about what cohort or segment of the population you are interested in and match the right predictive model or case finding technique to that segment.

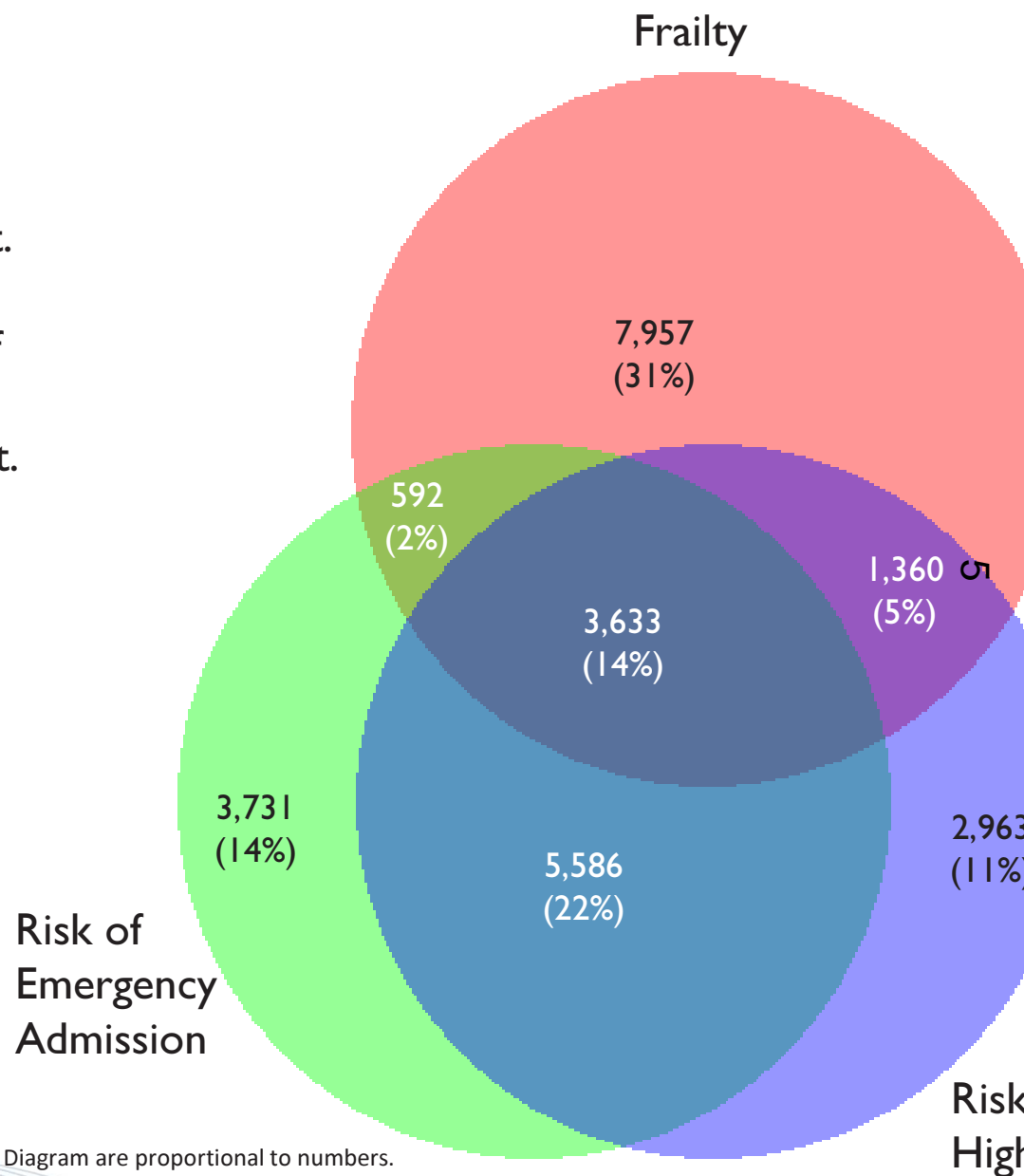
Three cohorts of patients:

Those who are flagged in the ACG System as having at least one condition associated with frailty (**n=13,542**)

Those most at risk of an emergency admission in coming year (**n=13,542**)

Those at risk of highest costs in coming year (**n=13,542**)

Total number of unique individuals = 25,822



Segments of Venn Diagram are proportional to numbers.
Created using BioVenn © 2007 - 2018 Tim Hulsen. <http://www.biovenn.nl>

Multimorbidity is associated with increased resource use and increased future

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LTC Count	Number of patients	% of patients	Average (mean)									
			Emergency admissions	Elective Admissions	A&E attendances	Outpatient attendances	Total APC cost	Emergency admission cost	Unique Prescription types	Risk of Emergency Admission	Risk of Persistent High Cost	
0	310,473	50.7%	0.0	0.0	0.2	0.4	£ 43	£ 25	1.0	6%	1%	
1	133,742	21.9%	0.1	0.1	0.3	1.0	£ 123	£ 50	2.3	12%	3%	
2	64,318	10.5%	0.1	0.2	0.3	1.6	£ 270	£ 91	3.9	17%	6%	
3	36,730	6.0%	0.1	0.3	0.4	2.3	£ 457	£ 145	5.4	22%	11%	
4	22,877	3.7%	0.2	0.4	0.4	2.9	£ 688	£ 242	6.8	27%	18%	
5	14,701	2.4%	0.3	0.6	0.5	3.5	£ 969	£ 388	8.2	33%	25%	
6	9,738	1.6%	0.3	0.7	0.6	4.1	£ 1,377	£ 575	9.4	39%	32%	
7	6,423	1.0%	0.5	0.8	0.7	4.7	£ 1,748	£ 862	10.4	45%	39%	
8+	12,958	2.1%	1.1	1.0	1.3	6.1	£ 3,610	£ 2,410	13.1	60%	55%	
Total	611,960	100%	0.1	0.1	0.3	1.2	£ 270	£ 129	2.7	13%	6%	

Multimorbidity drives cost, not age

Segments created by combining age of patient
with the number of chronic conditions they
have:

Number denotes number of chronic
conditions:

0 = 0

1 = 1

2 = 2 to 4

5 = 5 to 7

8 = 8 or more

Letter denotes age band:

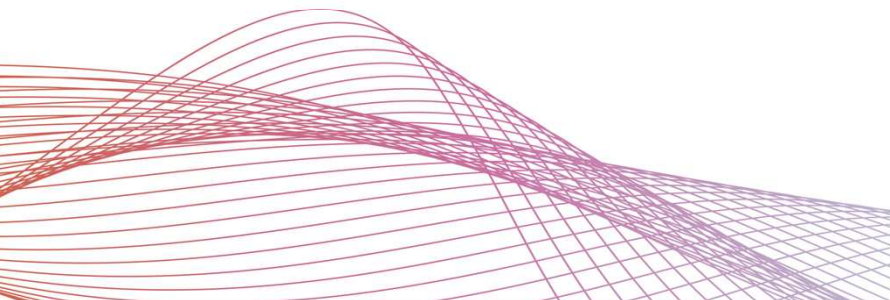
A = 0-17

B = 18-44

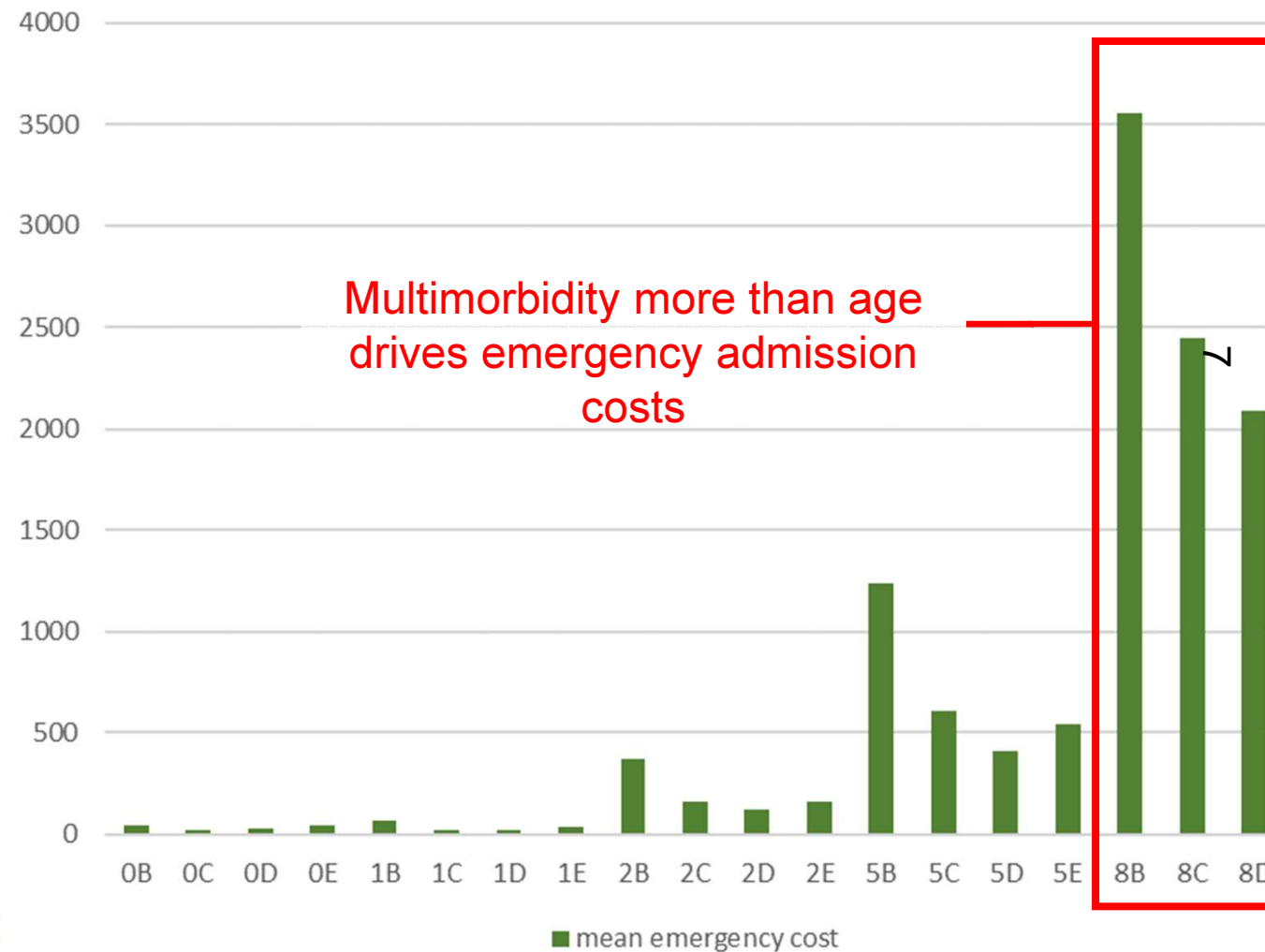
C = 45-64

D = 65-79

E = 80+



mean emergency cost



Multimorbidity more than age
drives emergency admission
costs


West Yorkshire population by age and chronic conditions (%)

multimorbidity is the norm

Chronic conditions	Children (00-17)	Adults of working age (18-64)	older people (65-84)	very old (85+)	Total (%)
0	83	53	14	5	51
1	14	26	18	8	22
2	2	11	18	10	11
3	1	5	15	12	6
4	0	2	11	12	4
5	0	1	8	12	2
6	0	1	6	10	2
7	0	0	4	8	1
8+	0	0	7	23	2
Total (%)	100	100	100	100	100

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28%

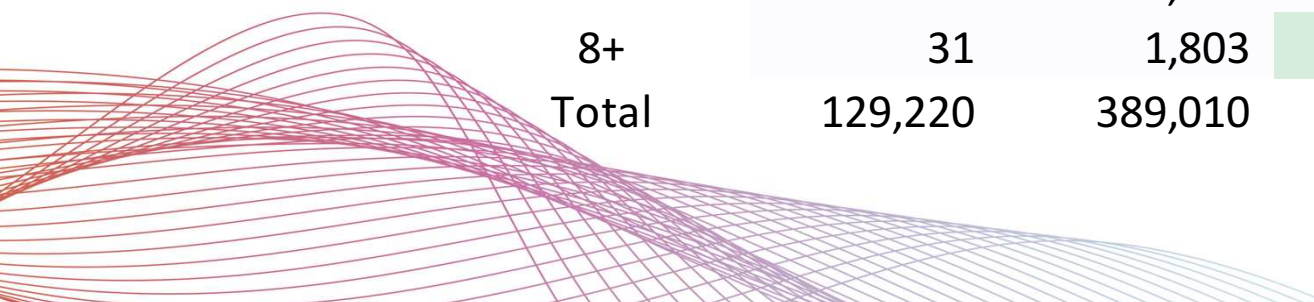


West Yorkshire population by age and chronic conditions (n)

multimorbidity is the norm

Chronic conditions	Children (00-17)	Adults of working age (18-64)	older people (65-84)	very old (85+)	Total
0	106,677	204,302	16,560	855	328,394
1	18,363	101,910	20,634	1,255	142,162
2	3,089	43,465	20,261	1,695	68,510
3	678	19,734	16,850	1,960	39,222
4	205	9,365	12,888	2,039	24,497
5	110	4,621	9,180	1,966	15,877
6	43	2,444	6,361	1,640	10,488
7	24	1,366	4,266	1,270	6,926
8+	31	1,803	8,405	3,747	13,986
Total	129,220	389,010	115,405	16,427	650,062

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179,



Specific combinations of long term conditions

People with diabetes and...	n	%	Avg cost (12mths)
Hypertension	19,621	55.0%	£ 1,611
Chronic Renal Failure	5,728	16.1%	£ 2,329
Persistent asthma	5,158	14.5%	£ 1,571
Ischemic Heart Condition	4,971	13.9%	£ 2,670
Low back pain	4,359	12.2%	£ 1,770
Hypothyroidism	2,974	8.3%	£ 1,662
Chronic Obstructive Pulmonary Disease	2,509	7.0%	£ 2,726
Congestive Heart Failure	2,254	6.3%	£ 4,191
Depression	1,886	5.3%	£ 3,075
Glaucoma	1,285	3.6%	£ 1,738
Age related macular degeneration	1,169	3.3%	£ 2,178
Osteoporosis	1,137	3.2%	£ 2,848
Rheumatoid arthritis	726	2.0%	£ 2,684
Seizure Disorders	648	1.8%	£ 2,616
Schizophrenia	382	1.1%	£ 1,790
Parkinson's Disease	279	0.8%	£ 2,598
Bipolar disorder	227	0.6%	£ 1,738
Immunosuppression/transplant	89	0.2%	£ 9,418
all people with diabetes	35,677	-	£ 1,188

People with Congestive Heart Failure and...	n	%	Avg cost (12mths)
Hypertension	4,837	69.0%	£ 3,993
Ischemic Heart Condition	3,082	44.0%	£ 4,095
Chronic Renal Failure	2,627	37.5%	£ 4,202
Diabetes	2,254	32.2%	£ 4,191
COPD	1,322	18.9%	£ 4,895
Low back pain	1,277	18.2%	£ 3,875
Persistent asthma	1,148	16.4%	£ 3,934
Hypothyroidism	857	12.2%	£ 4,333
Osteoporosis	692	9.9%	£ 4,586
Depression	533	7.6%	£ 6,346
Age related macular degeneration	490	7.0%	£ 3,859
Glaucoma	372	5.3%	£ 3,819
Rheumatoid arthritis	264	3.8%	£ 4,982
Seizure Disorders	179	2.6%	£ 5,094
Parkinson's Disease	133	1.9%	£ 4,857
Schizophrenia	87	1.2%	£ 5,181
Bipolar disorder	51	0.7%	£ 4,679
Immunosuppression/transplant	37	0.5%	£ 9,439
all people with Congestive Heart Failure	7,006	-	£ 3,420

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Recommendations

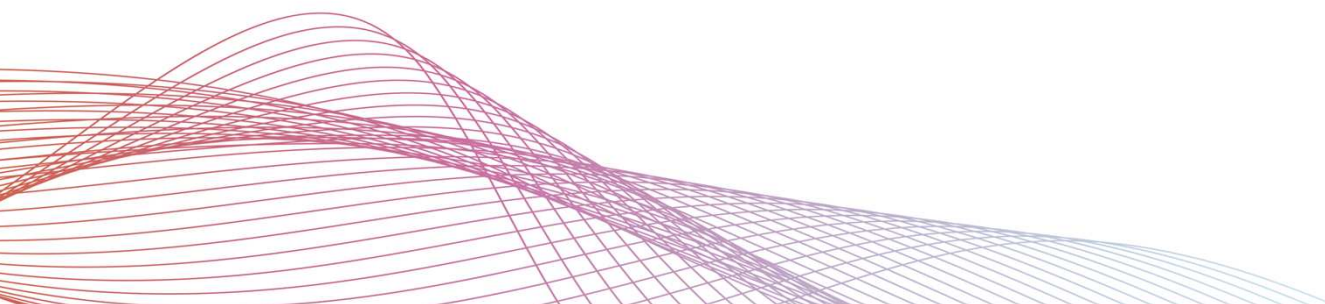
Develop a Leicestershire and wider LLR strategy for population health management, utilising risk stratification and care coordination approaches

Complete a further evidence review on the clustering of LTCs and define the key preventative interventions that should be prioritised across the system in line with the agreed priorities for risk stratification as part of the population health management approach.

Triangulate the results from this JSNA with those from the Right Care national evidence. In particular the falls and fragility \Rightarrow pathway and long-term conditions work.

Complete further analysis exploring different cohorts of high risk patients to develop appropriate interventions at the system, place and neighbourhood level of population health management.

PCNs to review LTC disease segmentation within own practices to identify local priorities for commissioning and care coordination.



Recommendations

Agree one, system-wide classification of frailty for LLR.

Work with academic partners to evaluate the impact of risk stratification and care coordination across LLR. This may be locally reviewed by reviewing the evaluation matrix and more formally through bidding for national funding and academic support.

Multimorbidity is now the norm, hence there is a need to ensure appropriate primary and secondary care services to address the needs holistically through implementation of the NICE guidance to ensure high quality care plans are completed at scale and accessible across organisations. UHL may therefore consider how it may treat multimorbid and frail patients more holistically in the longer term.

Embed MECC Plus across the system to ensure all professionals are aware of the prevention services and referral pathways available across Leicestershire.

LLR prevention board to consider the implications for frail and multimorbid patients as part of the self-care management workstream including use of assistive technologies.

