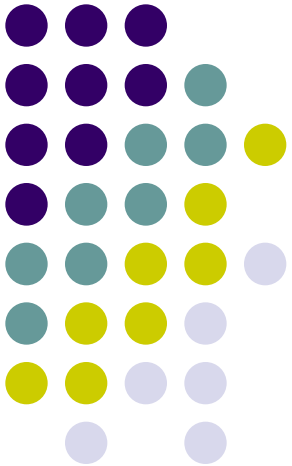
Tuesday 10 May 2016
Brisbane

I told you I was ill:

but would you let me code it!



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- On 27 February 2002 Terrence Allen (Spike) Milligan died
- He often quipped that he would like the epitaph

  “I told you I was ill” on his headstone

- St Thomas' churchyard diocese in Chichester refused to allow this epitaph
  - It was, effectively, against the coding rules
  - A suitable compromise was made

Chronic Conditions and Cost

- Significant interest in chronic disease and impact on cost
- Previous work examined number of conditions in each episode
  - Increase number conditions coded led to increased cost

But

- Is there a difference in examining chronic conditions
- Do conditions coded at any time in previous episodes impact on current cost
  - Can this be predicted for future cost
- Does the current coding environment cause us a problem in describing how people are ill?
  - Is it important
  - If so, can we work around this - Of course

Coding is not that precise and issues magnify through stages
Accuracy essential at each stage

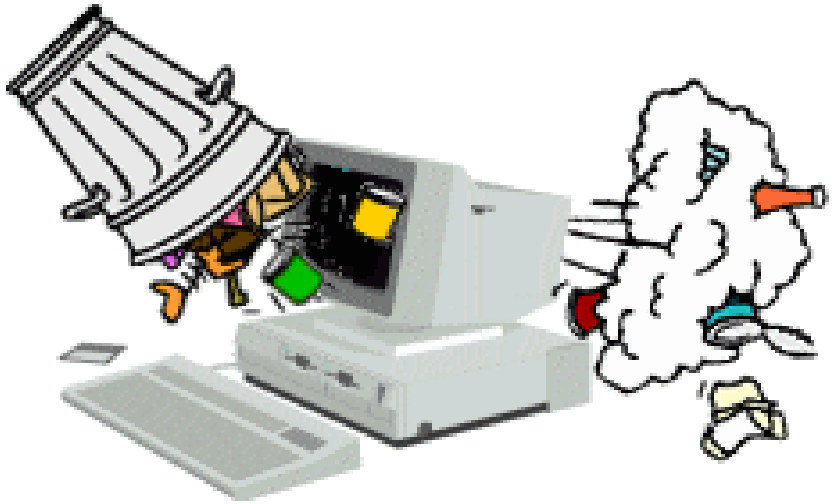
If 90% Conditions noticed

And 90% Documented

And 90% Interpreted

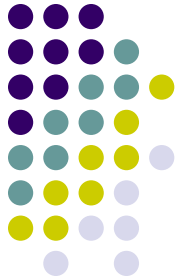
And 90% Entered correctly

= only 66% accuracy



Result: Garbage in – Garbage out

Coding: What we are trying to do

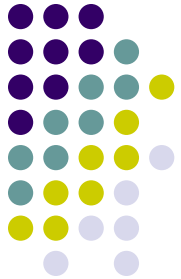


- **Ensure that what is documented and coded reflect;**
  - What brought the patient into hospital – the reason for admission (after study)
    - Principal diagnosis
  - What conditions were present that had bearing on care
    - Coexisting conditions/comorbidities
      - Commencement /alteration treatment:
      - Increased care &/or monitoring:
      - Diagnostic procs
  - What was done to the patient while in hospital
    - Interventions
  - What happened to the patient while in hospital
    - Complications, misadventures
  - Relevant biographical information
    - Age, weight, sex etc.
  - How they left
    - Separation mode

Exploration of the data

- What are persistent or Chronic conditions
  - Not necessarily incurable
  - However, likely to be present into the next year or so
  - Likely makes a difference to care
- The list of items
  - A reasonable and manageable number
  - Consultation with numbers of clinicians
  - Reasonably complete
- Capture of conditions over time is possible
  - All public hospital admissions in Tasmania are linkable
  - Linkage of longitudinal episodes was undertaken for past 10 years
    - Normal Newborn episodes were excluded as the only reason for admission was to be born

Considering a list of Chronic Conditions

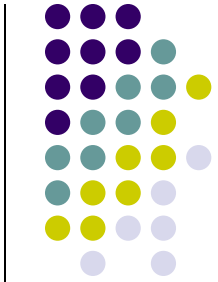


- About 50 Conditions identified from Coded data
  - Diagnoses
    - E.g. Body system
    - Cancers separated
  - Health Conditions
    - Palsies, Smoking, Drug Use, Alcohol, Dementia
  - Health Status
    - Palliative Care
  - Coded once and considered to have ongoing impact

Sample Condition

Sample Chronic Condition		
basic Title	**3rd CHr ICD**	**Description**
COPD	J41	Simple and mucopurulent chronic bronchitis
	J42	Unspecified chronic bronchitis
	J43	Emphysema
	J44	Other chronic obstructive pulmonary disease
	U831	Emphysema, without mention of chronic obstructive pulmonary disease
	U832	Chronic obstructive pulmonary disease

List of conditions in current consideration



Alcohol Abuse	Crohn's D / Ulcerative Colitis	IHD
Amphetamine and Other addictive drugs	COPD	AMI (Myocard Infarction)
Amputation - limb	CKD Grade III up	Depression
Antocoagulation - long term	Dementia	MS
Arthritis	T1 Diabetes	Macular Degeneration
Asthma	T2 Diabetes	Obesity
Borderline PD	Eating Disorders	Osteoporosis
Bronchiectasis	Emphysema	Palliative Care
Secondary CA	Epilepsy	Palsies - Hemiplegia
Ca_Blood	Blood Factor deficiency	Parkinson's D
Ca_Brain	HD, MND, Other Neurodegenrative	Peripheral Vascular Disease (PVD)
Ca_Breast	CCF	Psychosis
Ca_LungChest	Liver Failure	Rheumatoid Arth
Ca_Other	Hepatitis C	Resp Failure
Ca_UpperGI	ImmuneDef conditions	Scleroderma
Cystic Fibrosis	Hypertension	Significant retardation
		Smoker H/o or status

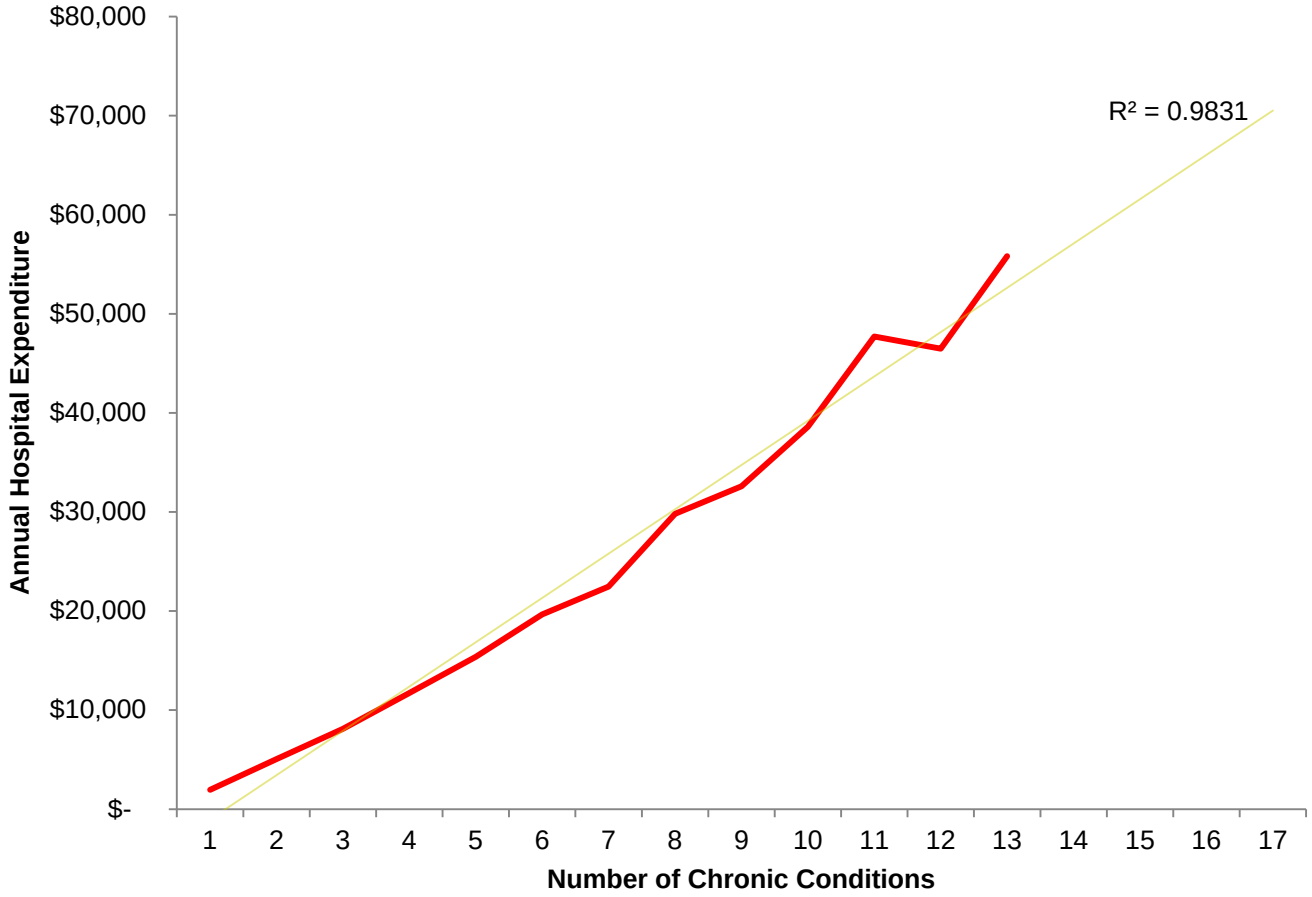
What we observed

- Coding of chronic conditions is not that reliable
  - The average rate of capture of any coexisting chronic condition for any particular episode is about 50%
  - Lessens value of Collection as reflecting Morbidity burden
- Linkage to Patient data containing Chronic Conditions Coding
  - 250K persons admitted over previous 10 years
  - About half have no previously coded chronic conditions
- Cost increases with increased number of coexisting conditions even in the same DRG
- The more concurrent chronic conditions a patient has;
  - The greater the risk of dying
  - The greater the cost of care in the next year
  - The greater the risk of misadventure
  - The greater the cost of care at DRG episode level

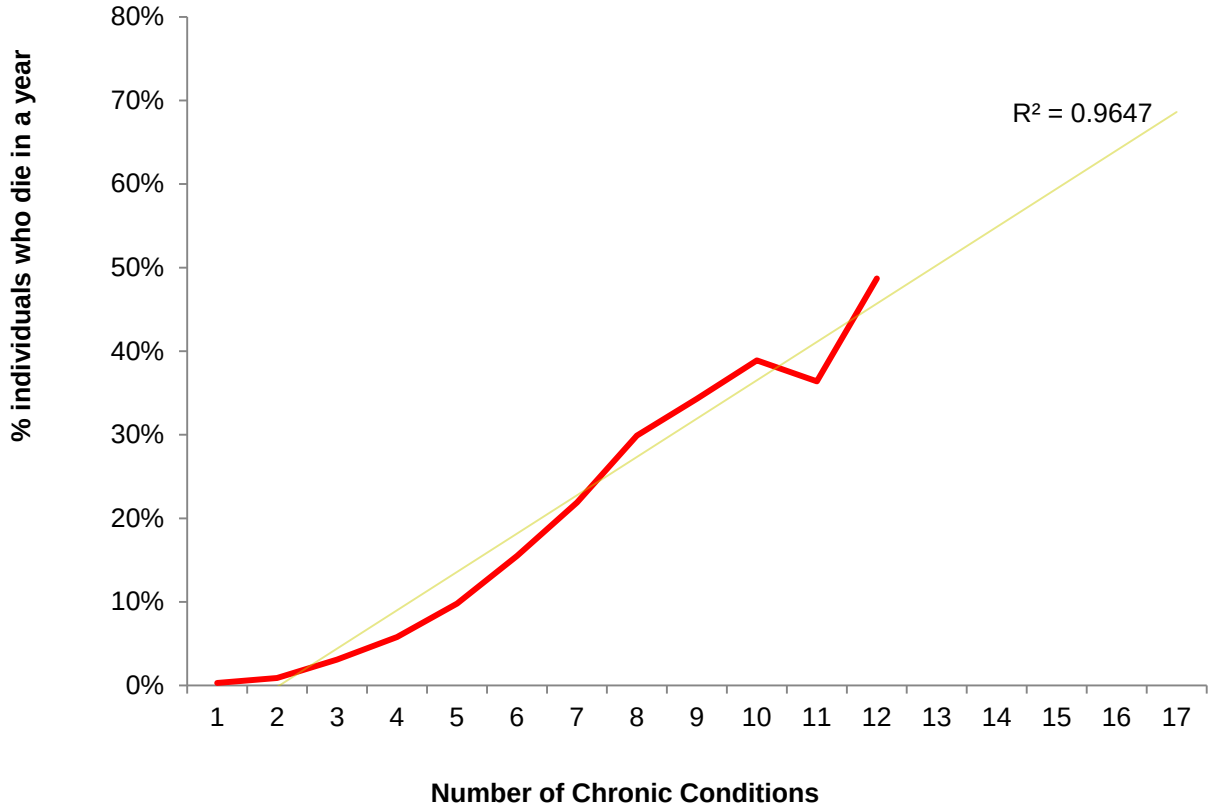
Rate of coding is Variable

Condition	Patients	Coded Episodes	Episodes since initial coded	% Coded Subsequent Episodes	Episodes Per patient
Alcohol	8,340	18,936	36,419	**52%**	5.7
Amputation limb (History)	825	4,198	13,006	**32%**	**24.5**
Arthritis	6,495	8,555	30,335	**28%**	6.7
Asthma	3,550	6,319	16,705	**38%**	6.7
COPD	8,294	20,315	48,225	**42%**	9.3
…					
Dementia	4,972	8,634	13,653	**63%**	5.7
Depression	6,896	19,088	43,112	**44%**	9.1
Diabetes Type 2	17,478	95,308	127,158	**75%**	9.1
Obesity	**3,260**	**6,808**	**35,930**	**19%**	**13.6**
Osteoporosis	24,679	85,831	131,435	**65%**	7.6
Smoking	90,822	212,610	408,371	**52%**	5.4
Sum	**175,611**	**486,602**	**904,349**	**48%**	**8.0**
Total Patients in Dataset	**279,661**	**1,003,320**			3.6

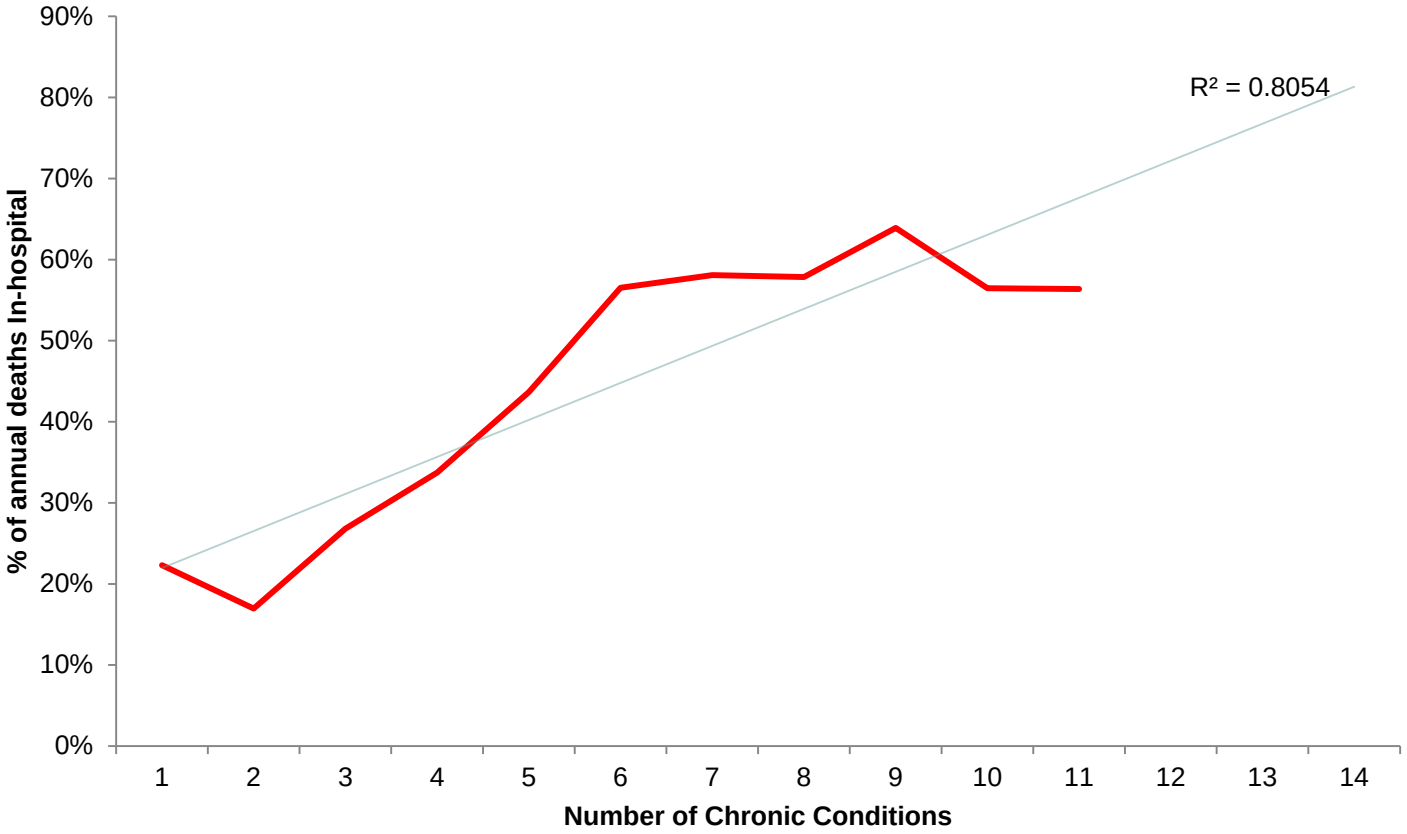
The more Chronic conditions a person has the more they cost in a year



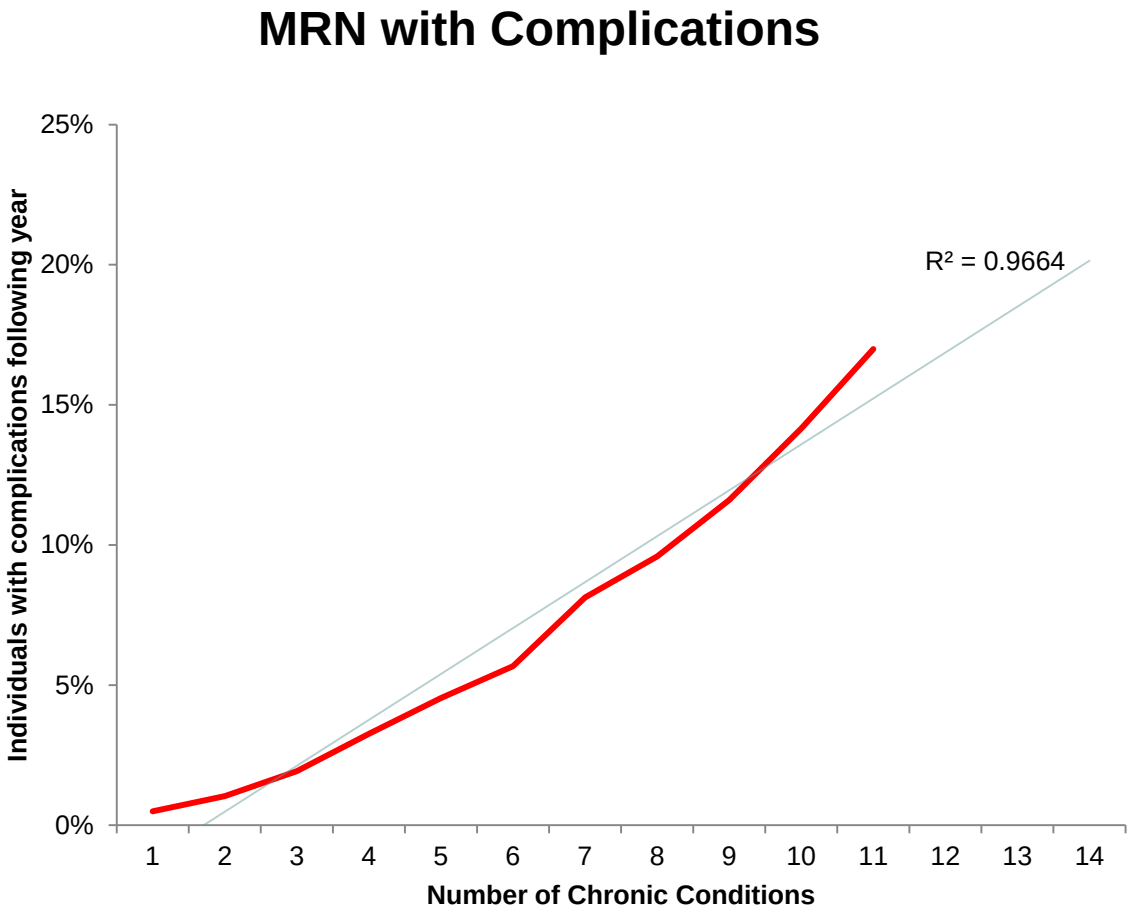
Increased comorbidity is associated with increased risk of death



Increased comorbidity has increased risk of dying in Hospital



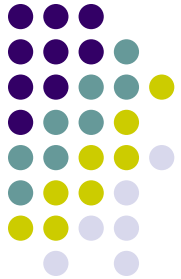
Increased comorbidity has increased risk of hospital complications in the next year



Characteristics of Multimorbid cases

- In 2014-15 Patients with 6+ chronic conditions from the beginning of the year
  - Number about 6,668 or 1.3% of the Tasmanian population
  - 4,085 of these patients were admitted during the year (61%)
  - Represent 7% of the admitted patients
  - Making up 16% of admitted episodes
  - Absorb over 17% of the entire Hospital Patient cost (IP, OP, ED)
  - Account for 57% of the in-hospital deaths
  - Have a higher risk of misadventure
  - 6+ Chronic Conditions
    - 9% greater average episode cost (within DRGs) C/w <4 Chronic conditions
  - Are predictable
    - A similar outcome was observed for 2013-14

Coding choices

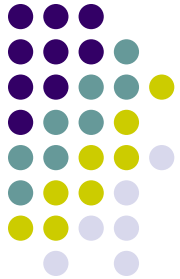


- Emphasis on coding is a significant health policy matter
  - However purpose is not explicitly or widely debated
- Choices in Coding Comorbidities
  - Coding of what is documented
    - Documented morbidity is enumerated
  - Coding of what impacts on the episode
    - Relevant morbidity only should be captured
      - Interpretation and explicit documentation varies
  - Coding of only what is explicitly treated in episode
    - No morbidity captured unless condition shown to be treated
      - (with a few exceptions)
      - Eliminates ability to provide risk stratification
- Q: why have we moved so far away from coding morbidity?

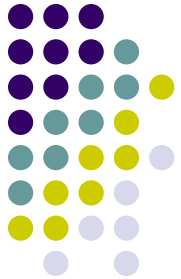
The “U”Codes in 9th Edition

- There is some good work now being done
- Series of codes in reserved area of ICD
- No impact on grouper but allows cases where Condition is documented, but not shown to otherwise meet ACS-0002, to be recorded
  - Evidence to date (6 months completed data) shows that;
    - Existing chapter codes are not being suppressed in our data
    - Significant increase in rate of capture of chronic conditions is observed
    - **However, coded or not, the presence of these conditions are shown to materially increase cost of episodes**

Capturing chronic conditions has provided us with a useful tool



- Can now segment activity projections
  - Several different groups that show marked differences in projected activity will have separate demand/cost projections
    - Short Stay / Emergency Cases
      - Rapidly increasing volumes
      - Cost significantly less than Matched DRG costs
    - Overnight admitted activity
      - Fairly static
    - Highly specialised interventions
      - High cost and where performed is very important
    - Patients with Multiple chronic conditions 6+
      - High cost and are they increasing in older, poorer and regional areas?



SO..

- Coding for chronic diseases has problems at the episode level
  - Coding rules and documentation issues suppress capture of conditions that should always have clinical impact and have significant demonstrated cost impact

But

- With a little creativity we can use the data in the patient coded records over time to provide useful information to inform the provision of healthcare for those who most require it

- We can get around the coding limitations….Spike Did!

Dúirt mé leat go raibh mé breoite

Thank You

for additional information and details of groupings

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