Chapter 12: Co-morbidity of new patients

Collection of co-morbidity data is essential for the Registry to assess national outcomes, to compare outcomes between centres, and to assess the effect of quality indicators and measured variables (e.g. blood pressure, haemoglobin, serum phosphate) on prognosis. Co-morbidity data is sought from all new patients starting renal replacement therapy. It has not been requested from existing patients when renal units first join the registry. Co-morbidity is only currently collected as at the time of starting renal replacement therapy.

The Renal Registry sub-committee reviewed the USRDS co-morbidity data and thought the 45 minutes per patient to complete that complex data set was not feasible in a busy UK unit. Therefore a "Yes/No" data set was specified to keep this time down less than 5 minutes and to only include items that can be precisely defined. After widespread consultation the following items were selected as those which, in the light of current knowledge, are those most likely to yield most information and to be amenable to precise and easy definition.

The most pressing need for the Registry is to improve the returns of co-morbidity data from patients starting renal replacement therapy. The Registry is collecting a unique database of sequential measures of quality of treatment on individual patients. This will act as a source for investigating the importance in determining prognosis of factors such as control of blood pressure, serum phosphate, haemoglobin, and serum cholesterol. The Registry is also a powerful tool for comparative audit. Without good co-morbidity data to enable comparisons of groups of similar patients the value of this data will be greatly reduced.

Co-morbidity Screen

The Registry installs a screen onto renal unit data systems to facilitate entry and collection of co-morbidity data. The CCL Proton is the data system most widely used: the co-morbidity screen for this is shown below. All these are "yes/no" fields:-

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_ Angina                                  _ Claudication
_ Previous MI within last 3 months        _ Ischaemic / Neuropathic ulcers
_ Previous MI > 3 months ago              _ Angioplasty (non coronary)
_ Previous CABG or coronary angioplasty   _ Amputation for Periph Vasc Dis

_ Cerebrovascular disease                 _ Smoking
_ Diabetes (not causing ESRF)
_ Chronic Obstructive Pulmonary Disease
_ Liver Disease
_ Malignancy
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Co-morbidity Data

Only four sites managed to return some co-morbidity on patients in 1998. It is hoped this will increase in 1999. Centres B, D, K, Q returned complete co-morbidity data set for 81%, 45%, 72% and 11% of patients respectively. The incomplete co-morbidity was partly due to some centres starting collection of data part way through the year.

The table below shows in the first column for the centre, the percentage of all new patients in 1998 with the co-morbidity data returned. The second column shows the percentage of patients with the specified co-morbidity as a percentage of those patients from whom co-morbidity data was received.

Centre	B		D		K	
Co-morbidity	**% of new**	**% of returns**	**% of new**	**% of returns**	**% of new**	**% of returns**
Angina	15	**18**	12	**25**	19	**25**
Previous MI < 3 months	1	**1**	2	**4**	2	**3**
Previous MI > 3 months	9	**11**	4	**8**	14	**19**
Previous CABG	4	**5**	2	**4**	7	**10**
Claudication	12	**14**	6	**13**	2	**6**
Ischaemic /neuropathic ulcers	8	**9**	4	**8**	0	**0**
Angioplasty non-coronary	4	**5**	4	**9**	0	**0**
Amputation for PVD	4	**5**	6	**12**	2	**3**
Cerebrovascular disease	6	**7**	12	**25**	14	**19**
Diabetes (not as a cause of ESRF)	10	**12**	6	**13**	7	**10**
COPD	3	**4**	4	**8**	2	**3**
Liver disease	1	**1**	2	**4**	0	**0**
Malignancy	8	**9**	6	**13**	12	**16**
Smoker	12	**15**	10	**22**	5	*****

Table 12.1 Co-morbidity in 1998 for selected centres

The percentage of patients who smoked was not calculated for centre K as they returned a large proportion of patients as unknown. The co-morbidity for centre Q is not shown, as the numbers were small.

Diabetes, not as a cause of end stage renal failure, was consistent between centres at 10-13 % of all patients with returns. Centre K starts fewer new patients with peripheral vascular co-morbidity and a higher proportion with cardiac co-morbidity.

It is not yet possible to weight the co-morbidity scores for risk, but for each individual patient the co-morbidity has been summed with the overall results shown in figure 12.1. Any patient with '*unknown*' for any of the co-morbidity items was excluded. Overall 47% of patients had some co-morbidity.

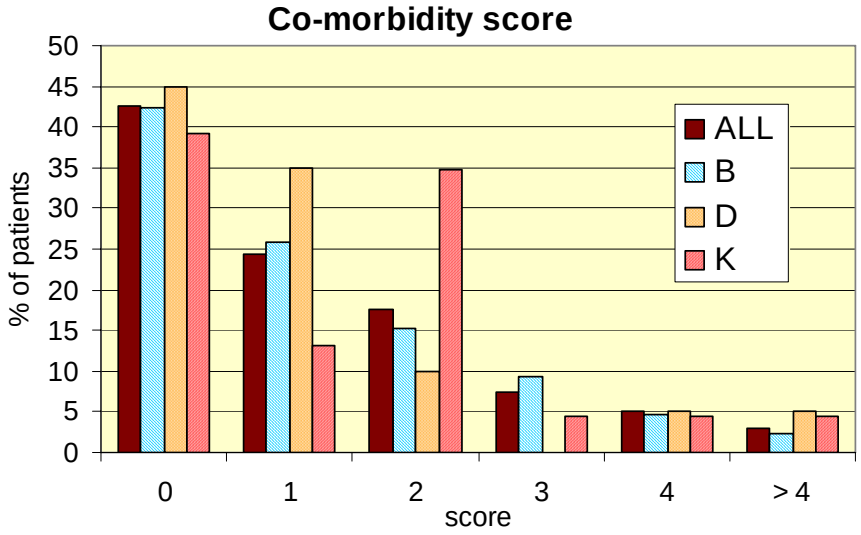

Figure 12.1 Co-morbidity score

The mean co-morbidity for centres B,D,K is 1.2, 1.0, 1.3 respectively.

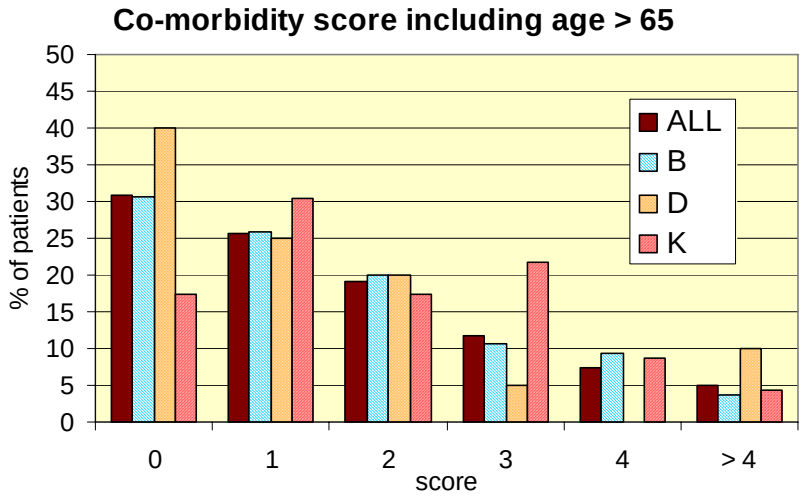

Figure 12.2 Co-morbidity score including patients age > 65

Patients over 65 in renal replacement therapy are at increased risk of death. In figure 12.2 a score of +1 has been added to the co-morbidity if the patient was over 65. This produced a mean patient co-morbidity score of 1.6, 1.4 and 1.9 for centres B, D, K respectively.

Co-morbidity definitions

Angina

History of chest pain on exercise with or without ECG changes, ETT, radionucleotide imaging or angiography.

Previous MI within last 3 months

MI diagnosed by ST segment elevation, Q waves in relevant leads, enzyme rise > x2 upper limit of normal (or rise in CKMB above local reference range).

Previous MI > 3 months ago

From time of start of renal replacement therapy.

Previous CABG or coronary angioplasty

Cerebrovascular disease

Any history of strokes (whatever cause) and including TIA caused by carotid disease.

Diabetes (not causing ESRF)

This includes diet controlled diabetics.

Chronic Obstructive Pulmonary Disease

This is defined as a slowly progressive airways disorder characterised by obstruction of the expiratory airflow which does not change markedly over several months, may be accompanied by airways hyper-reactivity and may be partially reversible.

N.B. chronic bronchitis and emphysema may occur in the absence of airflow obstruction. Asthma patients may rarely develop airflow obstruction that does not improve with steroids.

Liver Disease

This is defined as any abnormal LFTs at the time of registration.

Malignancy

Defined as any history of malignancy (even if curative) e.g. removal of basal cell carcinoma, melanoma.

Claudication

Current claudication based on a history, with or without Doppler or angiographic evidence.

Ischaemic / Neuropathic ulcers

Current presence of these ulcers.

Angioplasty (non coronary)

Amputation for Peripheral Vascular Disease

Smoking

Current smoker or history within the last year.