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Cycles in gender-related costs for long-term conditions

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In recent months 'Money Matters' has been highlighting the discrepancy between how health care costs actually change over time and the perceived way in which they 'should' or 'ought' to behave. Such views on how health care 'ought' to behave appear to pervade both health care policy and implementation and, hence by extension, a move to GP Commissioning 'should' lead to lower costs. The argument is a circular one. However, in reality, both hospital admissions, A&E attendances (Jones 2009a-d, 2010b,d,e-j,m, 2011a) and wider primary care costs (Jones 2010a,c,e,f, 2011b) appear to behave in a cyclic manner. Gender-specific issues have been identified (Jones 2010e,l,j). None of these trends can be explained by changes in the demographic make-up of the population.

Figure One presents the ratio of female to male costs for three long term or chronic conditions over an extended period of time in the USA. As can be seen 1992 (or possibly earlier) appears to mark the onset of a cascade of gender specific effects. Stroke is first to be affected, followed by pulmonary disease and then cancer. A second smaller cycle then appears to commence near to 1998 while a third commences somewhere near to 2002.

As has been pointed out these dates have particular significance in that they mark the point where an outbreak of a new type of immune disease (possibly attributable to Cytomegalovirus) has been deemed to occur in the USA (Jones 2010e). The dates are somewhat approximate as we are dealing with the average behaviour observed across the whole of the USA along with the possibility of onset at any point within a calendar year (Jones 2010e).

How can we explain the cascade of effects against different chronic conditions? In this respect the seminal work of Hanan Polanski (2003) regarding the effects of microcompetition with foreign DNA (i.e. from chronic viral infection) and the origin of chronic disease provides a logical explanation. The time-dependant effects of such microcompetition upon different aspects of human physiology and immunology become an explanation for the fact that different chronic conditions may show a time-lag with respect to other conditions. Hence the fact that cancer costs (as a group) have a time lag of about two years is consistent with the known slow progression of most cancers. This does not preclude the possibility that certain cancers may respond more rapidly as appears to have been documented in England (Jones 2010h).

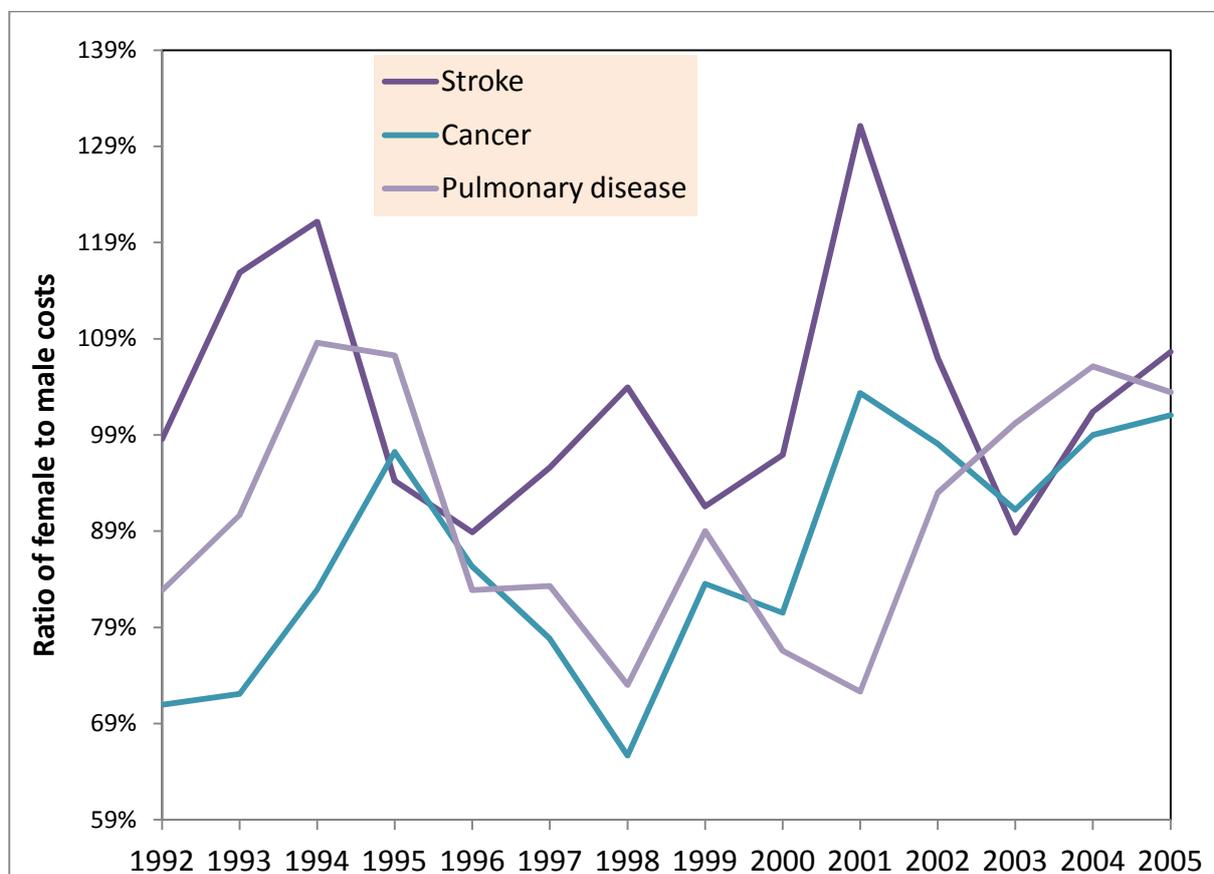
However of greatest interest is the marked gender-specific nature of these cycles which concurs with the gender specific nature of the proposed outbreaks of the new type of immune disease. Such

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gender specificity has its basis in the profound differences between male and female immune function and inflammatory responses (van Eijk et al 2007, Goetzl et al 2010, Yan et al 2010). It would appear that how health care costs actually behave is far removed from our current views on how they 'should' or 'ought to' behave. As economists have consistently noted demography plays an almost negligible part in the long term trends for health care costs (Mayhew 2001) and it is other factors which dominate the actual cost pressures.

From the point of view of developments such as GP Commissioning in the UK such observations imply that the greatest part of costs including the gender-specific aspects are driven by factors outside of the direct control of GP's (or any other health care provider) and will only be amenable to control via immunisation or anti-viral therapy (assuming the causative agent is indeed a virus). Other explanations may be possible but at the moment the biological one appears the most likely.

Figure 1: Ratio of female to male costs over time



Footnote: Data is for total health care expenditures of Medicare beneficiaries by chronic conditions and type of service, ages 65+: US, 1992-2005 (Source: MCBS) from <http://205.207.175.93/HDI/TableViewer/tableView.aspx> In order to view three separate disease categories the data is shown as a line graph, however, annual totals should be interpreted as a bar chart and presentation in this format would highlight the step-like increase which marks the onset of each cycle.

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