**Methodological note**

Analysis in this section does not attempt to investigate whether hip replacement surgery is in itself associated with an increased risk of death. It is complex to disentangle the risk of death associated specifically with undergoing surgery from the risk of death more generally. The risk of death will vary for individual patients as it is known to strongly increase with age and is generally higher for males than females. Of course, the presence of illness and disease will also strongly influence the risk of death. Therefore, death in the years following hip replacement surgery would not be unexpected for some of the patients considered here. An analysis of all-cause mortality rates for England and Wales suggests a likely overall death rate by one year after surgery of around 3.2% (based on the age and gender distribution of these patients). Therefore, the observed overall death rate of 1.64% (Table 3.15) is lower than the expected death rate for these patients based on their age and gender alone. This is likely to reflect what has been observed in other research studies that patients undergoing joint replacement may be generally healthier than others of a comparable age and gender.

![Figure 3.6](image-url)

**Figure 3.6**

Risk of death following primary hip replacement (cumulative hazard with 95% confidence intervals), by prosthesis type.