

## The Cost of Poor Quality: Assessing the Financial Impact of Sample Rejection and Recollection

**OBJECTIVES:** To use a model to assess the financial impact of specimen rejection using institution specific data for a number of institutions.

**METHODS:** Critical data (such as number of beds; overall budget; number of patients of different types seen each year; number of sample rejections; probable impact of sample rejection) were collected by interviewing institution staff from multiple country institutions (N=7). The data was then entered into a model to calculate the possible financial impact of the sample rejections. The model included elements that separated patients into different groups according to the likely effects of having a sample rejected, the probability that the rejection would have a low, medium or high impact and what consequences on institution time and resources each of these would have. The overall consequence was expressed either as lost patient treatment time or a financial cost.

**RESULTS:** The size of the institutions ranged from 326 to 1,200 beds, with total operating costs varying between €41 million and €1.1 billion. The number of blood tests per month was between 40,000 and 290,000 and of these between 0.02% and 2% were rejected (mean 0.85%). The total cost of specimen rejection ranged from €22k to €5.9 million per annum (mean €1.9 million), equating to a percentage of total operating costs from 0.1% to 1.2% (mean 0.3%). The estimated cost per patient for a sample rejection was from €135 to €349 (mean €224).

**CONCLUSIONS:** The nature of the model allows institutions to enter their own data and assumptions about the effect of sample rejection on patient treatment and cost. The results can then be compared to the results from other institutions to benchmark performance and assumptions. From the results, it is clear that a reduction in the number of rejected samples could lead to significant cost savings for most institutions.