Cost-effectiveness of strategies to improve delivery of brief interventions for heavy drinking in primary care: results from the ODHIN trial

# Supplementary material

## Appendix A

Statistical analysis of data from the trial was undertaken to estimate the independent effects of each strategy on each of the three performance measures of SBI delivery. This analysis takes advantage of the trial’s factorial design to compare the outcomes in, for example, all arms which include a TS component, to all those which do not, thus isolating the effect of Training and Support whilst improving the statistical power of the calculations over a simple comparison between the eight strategies. Combination strategies are dealt with in the same way (e.g. all arms including TS and FR are compared to all arms which do not include both components). Statistical models were fitted separately for each outcome at each time point (implementation and follow-up). Mixed Analysis of Variance (ANOVA) models were fitted to estimate the marginal mean outcome proportion for each factor at each time point, controlling for baseline outcome proportions and accounting for the hierarchical structure of the data, with practices nested within countries. From these marginal means, the percentage change in each outcome from baseline to each time point was calculated.

## Appendix B

Table 1: Delivery cost data collected during the trial

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cost element** | **Strategy** | **Country** | **Value** | **Source** |
| Cost of printing provider training material | TS | England | €0.37 per practitioner | Recorded by country teams running trial |
| Netherlands | €4.48 per practitioner |
| Poland | €5.34 per practitioner |
| FR | England | €0.14 per practitioner |
| Netherlands | No cost |
| Poland | €5.34 per practitioner |
| eBI | England | €0.23 per practitioner |
| Netherlands | €2.19 per practitioner |
| Poland | €5.34 per practitioner |
| Cost of delivering training and ongoing support | TS | England | €250.13 per practitioner | Recorded by country teams running trial. Trainer costs based on actual salaries of staff who delivered training and includes time spent travelling to/from training sessions and cost of the venue (where applicable) |
| Netherlands | €1313.34 per PHCU |
| Poland | €58.94 per practitioner |
| FR | England | €2.08 per practitioner |
| Netherlands | No cost |
| Poland | No cost |
| eBI | England | €125.07 per practitioner |
| Netherlands | No cost |
| Poland | No cost |
| Opportunity cost of GPs attending training | TS | England | €183.35 per practitioner | GP time estimated by country teams running trial. Cost per hour assumed to be as below |
| Netherlands | €231.19 per practitioner |
| Poland | No cost\* |
| FR | England | No cost |
| Netherlands | No cost |
| Poland | No cost\* |
| eBI | England | €91.67 per practitioner |
| Netherlands | No cost |
| Poland | No cost\* |
| Cost of practitioners' time |  | England | €91.67 per hour | PSSRU reference costs (1) |
| Netherlands | €57.80 per hour | Average cost of hiring a locum practitioner (2) |
| Poland | €28.29 per hour | Calculated from national estimates of practitioner list size, capitation fees and working hours (3) |
| Duration of BI delivery/referral to eBI tool | TS and FR | England | 5 minutes | Survey of 32 practitioners participating in trial |
| Netherlands | 10 minutes | Survey of 72 practitioners participating in trial |
| Poland | 10 minutes | Survey of 35 practitioners participating in trial |
| eBI | England | 3.27 minutes | Survey of 11 practitioners participating in trial |
| Netherlands | 6 minutes | Survey of 33 practitioners participating in trial |
| Poland | 4.62 minutes | Survey of 21 practitioners participating in trial |
| Cost of printing eBI referral material |  | England | €0.18 per eBI | Recorded by country teams running trial |
| Netherlands | €2.20 per eBI |
| Poland | €0.02 per eBI |
| Number of practitioners |  | England | 40,236 | HSCIC figures (4) |
| Netherlands | 8,865 | Commonwealth Fund Report (5) |
| Poland | 10,200 | GUS figures (6) |
| Number of PHCUs |  | England | 7,962 | HSCIC figures (7) |
| Netherlands | 4,917 | Commonwealth Fund Report (8) |
| Poland | 1,639 | GUS figures (6) |

\* Training sessions in Poland were conducted out of surgery hours and attended voluntarily by practitioners

For each strategy in the trial, the long-term costs of implementation at a national level were estimated for each country. Costs of training and printing literature were scaled up to national level using the estimates of the total numbers of practitioners and practices in each country. Costs of screening and delivering BIs were calculated from the number of screens, the number of positive screens and the number of BIs delivered estimated by the model using country- and strategy-specific estimates of the duration of BI delivery, multiplied by country-specific estimates of the per-minute staff costs. The duration of screening was assumed to be 30 seconds for the first question of the AUDIT-C tool and 130 seconds for the remaining 2 questions (assuming the patient does not reply that they do not drink to the first question) in line with previously published estimates (9).

The costs of financial reimbursement were calculated using the country-specific incentive structures and the number of screens and BIs delivered estimated from the model. Where maximum payments per practice or practitioner were in place during the trial, these were included in all calculations, with 12-weekly payments being capped at these levels.

## Appendix C

For all of the country-specific models, the probability of any individual screening positively on any given screening tool is estimated from a logistic regression of the form:

Equation 1:

$$P\left(Screen positive\right)=\frac{e^{(β\_{1}\*Mean consumption+β\_{2}+constant)}}{1+e^{(β\_{1}\*Mean consumption+β\_{2}+constant)}}$$

where $β\_{2}$ is an age-gender group-specific coefficient. The coefficients in the regression are estimated on pooled data from the 2000 and 2007 UK Adult Psychiatric Morbidity Surveys, which include data on respondents’ age, gender, alcohol consumption and scores on a range of common alcohol screening tools such as AUDIT, AUDIT-C and FAST. For the analysis conducted here, regressions were fitted to estimate the probability of screening positive on AUDIT-C with thresholds of 4 and 5. Within the country models, every individual who is screened is randomly allocated to screening positive or negative based on their probability of screening positive predicted from this regression.

This process means that every country model has an implied screen positive rate, since this is the proportion of individuals screened under any strategy who screen positive. These rates may not necessarily match those screen positive rates observed for the same strategy in the trial. In order to address this discrepancy, and to better account for the impact of each strategy on screen positive rates, a single additional coefficient, α, is estimated for each strategy in each country such that the following equation is satisfied:

Equation 2:

$$Screen positive rate from trial=\frac{\sum\_{i}^{}(weight\_{i}\*\frac{e^{\left(α\*β\_{1}\*Mean consumption\_{i}+α\*β\_{2}\_{i}+α\*constant\right)}}{1+e^{\left(α\*β\_{1}\*Mean consumption\_{i}+α\*β\_{2}\_{i}+α\*constant\right)}})}{\sum\_{i}^{}weight\_{i}}$$

where *i* represents the individuals who populate the country-specific model and $weight\_{i}$ their corresponding weighting within the model. The adjusted Equation 2, incorporating the value of α is then used within the model when predicting the probability of any individual screening positive. This calibration ensures that the implied screen rates from the model match those observed within the trial.

## Appendix D

Table 2 - Cost-effectiveness thresholds by country

|  |  |  |
| --- | --- | --- |
| **Country** | **Cost-effectiveness threshold per QALY** | **Source** |
| England | £20,000 | National Institute of Health and Clinical Excellence (NICE) 2013 (10) |
| Netherlands | € 20,000 | Niessen et al. 2007 (11) |
| Poland | 26,750 zł | Mid-point of 12500-41000zł range from Orlewska & Mierzejewski 2004 (12) |

Table 3 - Discount rates by country

|  |  |  |  |
| --- | --- | --- | --- |
| **Country** | **Discount rate for costs** | **Discount rate for health outcomes** | **Source** |
| England | 3.5% | 3.5% | National Institute of Health and Clinical Excellence (NICE) 2013 (10) |
| Netherlands | 4.0% | 1.5% | College Voor Zorkverzekeringen 2010 (13) |
| Poland | 5.0% | 5.0% | Orlewska & Mierzejewski 2004 (12) |

## Appendix E

Table 4 - Full trial-only results for all strategies

|  |  |  |
| --- | --- | --- |
|   | **Versus no SBIs** | **Incremental versus control** |
| **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **CER/QALY** | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **ICER/QALY** |
|
| **England** | **Control** | 14.3 | 0.0 | 49.8 | -35.5 | 4.6 | Dominates |   |   |   |   |   |   |
| **TS** | 30.3 | 17.4 | 184.0 | -136.4 | 16.2 | Dominates | 15.9 | 17.4 | 134.2 | -101.0 | 11.6 | Dominates |
| **FR in trial** | 32.9 | 15.2 | 198.1 | -150.0 | 18.5 | Dominates | 18.5 | 15.2 | 148.3 | -114.5 | 13.8 | Dominates |
| **eBI** | 22.1 | 8.7 | 120.4 | -89.6 | 10.9 | Dominates | 7.8 | 8.7 | 70.6 | -54.2 | 6.2 | Dominates |
| **TS+FR in trial** | 37.0 | 32.6 | 214.7 | -145.1 | 20.0 | Dominates | 22.6 | 32.6 | 164.9 | -109.7 | 15.3 | Dominates |
| **TS+eBI** | 23.5 | 26.0 | 155.1 | -105.6 | 13.6 | Dominates | 9.1 | 26.0 | 105.3 | -70.1 | 9.0 | Dominates |
| **FR+eBI in trial** | 23.7 | 23.9 | 161.2 | -113.6 | 14.0 | Dominates | 9.4 | 23.9 | 111.4 | -78.1 | 9.3 | Dominates |
| **TS+FR+eBI in trial** | 27.2 | 41.2 | 175.7 | -107.3 | 16.8 | Dominates | 12.9 | 41.2 | 125.9 | -71.8 | 12.2 | Dominates |
| **Netherlands** | **Control** | 6.4 | 0.0 | 10.3 | -4.0 | 1.0 | Dominates |   |   |   |   |   |   |
| **TS** | 14.7 | 8.6 | 27.2 | -3.9 | 2.5 | Dominates | 8.4 | 8.6 | 16.9 | 0.1 | 1.6 | € 39 |
| **FR in trial** | 15.8 | 3.3 | 27.0 | -7.8 | 2.3 | Dominates | 9.4 | 3.3 | 16.6 | -3.9 | 1.3 | Dominates |
| **eBI** | 10.0 | 0.0 | 17.9 | -7.9 | 1.4 | Dominates | 3.6 | 0.0 | 7.5 | -3.9 | 0.4 | Dominates |
| **TS+FR in trial** | 18.6 | 11.9 | 33.9 | -3.4 | 3.4 | Dominates | 12.2 | 11.9 | 23.5 | 0.6 | 2.4 | € 248 |
| **TS+eBI** | 11.6 | 8.6 | 23.5 | -3.3 | 2.1 | Dominates | 5.2 | 8.6 | 13.2 | 0.7 | 1.1 | € 633 |
| **FR+eBI in trial** | 11.4 | 3.4 | 22.1 | -7.3 | 1.9 | Dominates | 5.1 | 3.4 | 11.7 | -3.3 | 0.9 | Dominates |
| **TS+FR+eBI in trial** | 14.2 | 11.9 | 30.3 | -4.2 | 2.9 | Dominates | 7.8 | 11.9 | 20.0 | -0.2 | 1.9 | Dominates |
| **Poland** | **Control** | 0.8 | 0.1 | 0.0 | 0.8 | 0.1 | € 13,667 |   |   |   |   |   |   |
| **TS** | 2.9 | 0.7 | 0.2 | 3.3 | 2.2 | € 1,509 | 2.1 | 0.6 | 0.2 | 2.5 | 2.1 | € 1,164 |
| **FR in trial** | 2.4 | 3.9 | 0.1 | 6.2 | 0.9 | € 6,945 | 1.6 | 0.0 | 0.1 | 1.5 | 0.8 | € 1,841 |
| **eBI** | 1.4 | 0.1 | 0.0 | 1.4 | 0.5 | € 2,800 | 0.6 | 0.0 | 0.0 | 0.6 | 0.4 | € 1,318 |
| **TS+FR in trial** | 3.3 | 4.5 | 0.3 | 7.6 | 2.7 | € 2,791 | 2.6 | 0.6 | 0.3 | 2.9 | 2.7 | € 1,091 |
| **TS+eBI** | 1.6 | 0.7 | 0.0 | 2.2 | 0.3 | € 7,000 | 0.8 | 0.6 | 0.0 | 1.4 | 0.3 | € 5,385 |
| **FR+eBI in trial** | 1.6 | 3.9 | 0.0 | 5.5 | 0.5 | € 10,748 | 0.8 | 0.0 | 0.0 | 0.8 | 0.5 | € 1,800 |
| **TS+FR+eBI in trial** | 1.8 | 4.5 | 0.0 | 6.2 | 0.4 | € 17,807 | 1.0 | 0.6 | 0.0 | 1.6 | 0.3 | € 5,379 |

## Appendix F

Table 5 - Full implementation results for all strategies

|  |  |  |
| --- | --- | --- |
|   | **Versus no SBI delivery** | **Incremental versus control** |
| **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **CER/QALY** | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **ICER** |
|
| **England** | **Control** | 14.34 | 0.00 | 49.79 | -35.44 | 4.64 | Dominates |   |   |   |   |   |   |
| **TS** | 30.27 | 17.35 | 184.03 | -136.40 | 16.23 | Dominates | 15.93 | 17.35 | 134.24 | -100.96 | 11.59 | Dominates |
| **FR**  | 55.46 | 77.54 | 353.81 | -220.81 | 33.53 | Dominates | 41.11 | 77.54 | 304.02 | -185.37 | 28.89 | Dominates |
| **eBI** | 22.13 | 8.68 | 120.42 | -89.62 | 10.85 | Dominates | 7.78 | 8.68 | 70.63 | -54.18 | 6.21 | Dominates |
| **TS+FR**  | 63.60 | 100.74 | 398.17 | -233.83 | 38.05 | Dominates | 49.26 | 100.74 | 348.39 | -198.39 | 33.41 | Dominates |
| **TS+eBI** | 23.48 | 26.03 | 155.06 | -105.55 | 13.60 | Dominates | 9.14 | 26.03 | 105.27 | -70.11 | 8.96 | Dominates |
| **FR+eBI**  | 34.47 | 68.35 | 239.49 | -136.67 | 21.99 | Dominates | 20.13 | 68.35 | 189.70 | -101.23 | 17.35 | Dominates |
| **TS+FR+eBI**  | 40.22 | 101.90 | 308.47 | -166.36 | 29.77 | Dominates | 25.87 | 101.90 | 258.69 | -130.91 | 25.13 | Dominates |
| **Netherlands** | **Control** | 6.37 | 0.00 | 10.34 | -3.96 | 0.97 | Dominates |  |  |  |  |  |  |
| **TS** | 14.74 | 8.59 | 27.24 | -3.91 | 2.52 | Dominates | 8.37 | 8.59 | 16.90 | 0.05 | 1.54 | € 32 |
| **FR**  | 21.28 | 58.85 | 37.19 | 42.94 | 3.11 | € 13,814 | 14.91 | 58.85 | 26.85 | 46.91 | 2.14 | € 21,958 |
| **eBI** | 9.96 | 0.02 | 17.85 | -7.87 | 1.35 | Dominates | 3.59 | 0.02 | 7.52 | -3.91 | 0.37 | Dominates |
| **TS+FR**  | 25.60 | 76.66 | 45.95 | 56.30 | 4.53 | € 12,439 | 19.22 | 76.66 | 35.62 | 60.26 | 3.55 | € 16,958 |
| **TS+eBI** | 11.61 | 8.61 | 23.50 | -3.28 | 2.06 | Dominates | 5.24 | 8.61 | 13.16 | 0.68 | 1.09 | € 629 |
| **FR+eBI**  | 14.06 | 36.69 | 27.25 | 23.49 | 2.80 | € 8,402 | 7.69 | 36.69 | 16.92 | 27.46 | 1.82 | € 15,055 |
| **TS+FR+eBI**  | 17.22 | 60.00 | 34.38 | 42.85 | 2.99 | € 14,309 | 10.85 | 60.00 | 24.04 | 46.81 | 2.02 | € 23,150 |
| **Poland** | **Control** | 0.78 | 0.05 | 0.01 | 0.83 | 0.06 | € 13,106 |   |   |   |   |   |   |
| **TS** | 2.87 | 0.66 | 0.21 | 3.32 | 2.20 | € 1,511 | 2.09 | 0.60 | 0.20 | 2.49 | 2.14 | € 1,168 |
| **FR**  | 4.79 | 10.04 | 0.44 | 14.38 | 4.19 | € 3,435 | 4.01 | 9.98 | 0.43 | 13.56 | 4.12 | € 3,287 |
| **eBI** | 1.39 | 0.05 | 0.04 | 1.40 | 0.50 | € 2,793 | 0.61 | 0.00 | 0.03 | 0.58 | 0.44 | € 1,312 |
| **TS+FR**  | 5.75 | 13.33 | 0.56 | 18.52 | 5.48 | € 3,380 | 4.96 | 13.27 | 0.55 | 17.69 | 5.42 | € 3,266 |
| **TS+eBI** | 1.61 | 0.66 | 0.03 | 2.23 | 0.32 | € 6,998 | 0.83 | 0.60 | 0.02 | 1.40 | 0.26 | € 5,490 |
| **FR+eBI**  | 2.50 | 7.64 | 0.26 | 9.87 | 2.72 | € 3,632 | 1.71 | 7.58 | 0.25 | 9.04 | 2.65 | € 3,407 |
| **TS+FR+eBI**  | 3.05 | 10.45 | 0.33 | 13.17 | 3.36 | € 3,918 | 2.27 | 10.40 | 0.32 | 12.35 | 3.30 | € 3,742 |

## Appendix G

Table 6 - Full retraining sensitivity analysis results for England

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Versus no SBIs** | **Incremental versus baseline** |
|  |  | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **CER/QALY** | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **ICER/QALY** |
|  |  |
| **Retraining every 5 years** | **Control** | 14.34 | 0.01 | 49.79 | -35.44 | 4.64 | Dominates |  |  |  |  |  |  |
| **TS** | 30.27 | 32.48 | 184.03 | -121.28 | 16.23 | Dominates | 15.93 | 32.47 | 134.24 | -85.84 | 11.59 | Dominates |
| **FR**  | 55.46 | 77.65 | 353.81 | -220.71 | 33.53 | Dominates | 41.11 | 77.64 | 304.02 | -185.27 | 28.89 | Dominates |
| **eBI** | 22.13 | 16.24 | 120.42 | -82.05 | 10.85 | Dominates | 7.78 | 16.23 | 70.63 | -46.62 | 6.21 | Dominates |
| **TS+FR**  | 63.60 | 115.96 | 398.17 | -218.61 | 38.05 | Dominates | 49.26 | 115.96 | 348.39 | -183.17 | 33.41 | Dominates |
| **TS+eBI** | 23.48 | 48.71 | 155.06 | -82.86 | 13.60 | Dominates | 9.14 | 48.70 | 105.27 | -47.43 | 8.96 | Dominates |
| **FR+eBI**  | 34.47 | 76.01 | 239.49 | -129.01 | 21.99 | Dominates | 20.13 | 76.00 | 189.70 | -93.57 | 17.35 | Dominates |
| **TS+FR+eBI**  | 40.22 | 124.69 | 308.47 | -143.57 | 29.77 | Dominates | 25.87 | 124.68 | 258.69 | -108.14 | 25.13 | Dominates |
| **Retraining every 2 years** | **Control** | 14.34 | 0.02 | 49.79 | -35.43 | 4.64 | Dominates |  |  |  |  |  |  |
| **TS** | 30.27 | 75.97 | 184.03 | -77.78 | 16.23 | Dominates | 15.93 | 75.96 | 134.24 | -42.35 | 11.59 | Dominates |
| **FR**  | 55.46 | 77.94 | 353.81 | -220.42 | 33.53 | Dominates | 41.11 | 77.92 | 304.02 | -184.99 | 28.89 | Dominates |
| **eBI** | 22.13 | 37.99 | 120.42 | -60.30 | 10.85 | Dominates | 7.78 | 37.98 | 70.63 | -24.87 | 6.21 | Dominates |
| **TS+FR**  | 63.60 | 159.75 | 398.17 | -174.83 | 38.05 | Dominates | 49.26 | 159.73 | 348.39 | -139.40 | 33.41 | Dominates |
| **TS+eBI** | 23.48 | 113.95 | 155.06 | -17.63 | 13.60 | Dominates | 9.14 | 113.94 | 105.27 | 17.80 | 8.96 | € 1,988 |
| **FR+eBI**  | 34.47 | 98.05 | 239.49 | -106.97 | 21.99 | Dominates | 20.13 | 98.03 | 189.70 | -71.54 | 17.35 | Dominates |
| **TS+FR+eBI**  | 40.22 | 190.21 | 308.47 | -78.05 | 29.77 | Dominates | 25.87 | 190.19 | 258.69 | -42.62 | 25.13 | Dominates |

Table 7 - Full retraining sensitivity analysis results for the Netherlands

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Versus no SBIs** | **Incremental versus baseline** |
|  |  | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **CER/QALY** | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **ICER/QALY** |
|  |  |
| **Retraining every 5 years** | **Control** | 6.37 | 0.00 | 10.34 | -3.96 | 0.97 | Dominates |  |  |  |  |  |  |
| **TS** | 14.74 | 15.93 | 27.24 | 3.43 | 2.52 | € 1,362 | 8.37 | 15.93 | 16.90 | 7.39 | 1.54 | € 4,788 |
| **FR**  | 21.28 | 58.85 | 37.19 | 42.94 | 3.11 | € 13,814 | 14.91 | 58.85 | 26.85 | 46.91 | 2.14 | € 21,958 |
| **eBI** | 9.96 | 0.04 | 17.85 | -7.86 | 1.35 | Dominates | 3.59 | 0.04 | 7.52 | -3.89 | 0.37 | Dominates |
| **TS+FR**  | 25.60 | 84.00 | 45.95 | 63.64 | 4.53 | € 14,061 | 19.22 | 84.00 | 35.62 | 67.60 | 3.55 | € 19,023 |
| **TS+eBI** | 11.61 | 15.96 | 23.50 | 4.08 | 2.06 | € 1,979 | 5.24 | 15.96 | 13.16 | 8.04 | 1.09 | € 7,397 |
| **FR+eBI**  | 14.06 | 36.70 | 27.25 | 23.51 | 2.80 | € 8,408 | 7.69 | 36.70 | 16.92 | 27.47 | 1.82 | € 15,064 |
| **TS+FR+eBI**  | 17.22 | 67.36 | 34.38 | 50.20 | 2.99 | € 16,765 | 10.85 | 67.36 | 24.04 | 54.17 | 2.02 | € 26,788 |
| **Retraining every 2 years** | **Control** | 6.37 | 0.00 | 10.34 | -3.96 | 0.97 | Dominates |  |  |  |  |  |  |
| **TS** | 14.74 | 36.93 | 27.24 | 24.43 | 2.52 | € 9,709 | 8.37 | 36.93 | 16.90 | 28.39 | 1.54 | € 18,395 |
| **FR**  | 21.28 | 58.85 | 37.19 | 42.94 | 3.11 | € 13,814 | 14.91 | 58.85 | 26.85 | 46.91 | 2.14 | € 21,958 |
| **eBI** | 9.96 | 0.08 | 17.85 | -7.81 | 1.35 | Dominates | 3.59 | 0.08 | 7.52 | -3.85 | 0.37 | Dominates |
| **TS+FR**  | 25.60 | 105.00 | 45.95 | 84.64 | 4.53 | € 18,700 | 19.22 | 105.00 | 35.62 | 88.60 | 3.55 | € 24,933 |
| **TS+eBI** | 11.61 | 37.01 | 23.50 | 25.12 | 2.06 | € 12,200 | 5.24 | 37.01 | 13.16 | 29.09 | 1.09 | € 26,759 |
| **FR+eBI**  | 14.06 | 36.75 | 27.25 | 23.56 | 2.80 | € 8,425 | 7.69 | 36.75 | 16.92 | 27.52 | 1.82 | € 15,090 |
| **TS+FR+eBI**  | 17.22 | 88.41 | 34.38 | 71.25 | 2.99 | € 23,794 | 10.85 | 88.41 | 24.04 | 75.22 | 2.02 | € 37,197 |

Table 8 - Full retraining Sensitivity Analysis results for Poland

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Versus no SBIs** | **Incremental versus baseline** |
|  |  | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **CER/QALY** | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **ICER/QALY** |
|  |  |
| **Retraining every 5 years** | **Control** | 0.78 | 0.10 | 0.01 | 0.87 | 0.06 | € 13,815 |  |  |  |  |  |  |
| **TS** | 2.87 | 1.20 | 0.21 | 3.86 | 2.20 | € 1,756 | 2.09 | 1.10 | 0.20 | 2.99 | 2.14 | € 1,400 |
| **FR**  | 4.79 | 6.18 | 0.44 | 10.53 | 4.19 | € 2,514 | 4.01 | 6.08 | 0.43 | 9.65 | 4.12 | € 2,341 |
| **eBI** | 1.39 | 0.10 | 0.04 | 1.45 | 0.50 | € 2,882 | 0.61 | 0.00 | 0.03 | 0.58 | 0.44 | € 1,312 |
| **TS+FR**  | 5.75 | 13.50 | 0.56 | 18.70 | 5.48 | € 3,412 | 4.96 | 13.40 | 0.55 | 17.82 | 5.42 | € 3,291 |
| **TS+eBI** | 1.61 | 1.20 | 0.03 | 2.77 | 0.32 | € 8,689 | 0.83 | 1.10 | 0.02 | 1.90 | 0.26 | € 7,423 |
| **FR+eBI**  | 2.50 | 3.41 | 0.26 | 5.65 | 2.72 | € 2,077 | 1.71 | 3.31 | 0.25 | 4.77 | 2.65 | € 1,798 |
| **TS+FR+eBI**  | 3.05 | 6.10 | 0.33 | 8.82 | 3.36 | € 2,622 | 2.27 | 6.00 | 0.32 | 7.95 | 3.30 | € 2,408 |
| **Retraining every 2 years** | **Control** | 0.78 | 0.23 | 0.01 | 1.00 | 0.06 | € 15,825 |  |  |  |  |  |  |
| **TS** | 2.87 | 2.72 | 0.21 | 5.39 | 2.20 | € 2,451 | 2.09 | 2.50 | 0.20 | 4.39 | 2.14 | € 2,056 |
| **FR**  | 4.79 | 6.31 | 0.44 | 10.65 | 4.19 | € 2,544 | 4.01 | 6.08 | 0.43 | 9.65 | 4.12 | € 2,341 |
| **eBI** | 1.39 | 0.23 | 0.04 | 1.58 | 0.50 | € 3,135 | 0.61 | 0.00 | 0.03 | 0.58 | 0.44 | € 1,312 |
| **TS+FR**  | 5.75 | 15.03 | 0.56 | 20.22 | 5.48 | € 3,691 | 4.96 | 14.81 | 0.55 | 19.22 | 5.42 | € 3,549 |
| **TS+eBI** | 1.61 | 2.72 | 0.03 | 4.30 | 0.32 | € 13,478 | 0.83 | 2.50 | 0.02 | 3.30 | 0.26 | € 12,899 |
| **FR+eBI**  | 2.50 | 3.54 | 0.26 | 5.77 | 2.72 | € 2,124 | 1.71 | 3.31 | 0.25 | 4.77 | 2.65 | € 1,798 |
| **TS+FR+eBI**  | 3.05 | 7.63 | 0.33 | 10.35 | 3.36 | € 3,077 | 2.27 | 7.40 | 0.32 | 9.35 | 3.30 | € 2,833 |

## Appendix H

Table 9 - Full reduced duration of effect Sensitivity Analysis results for all countries

|  |  |  |
| --- | --- | --- |
|   | **Versus no SBIs** | **Incremental versus control** |
| **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **CER/QALY** | **Screening Cost (€m)** | **Policy cost (€m)** | **Hospital savings (€m)** | **Net cost (€m)** | **QALYs gained (,000s)** | **ICER/QALY** |
|
| **England** | **Control** | 14.3 | 0.0 | 21.8 | -7.4 | 2.1 | Dominates |   |   |   |   |   |   |
| **TS** | 30.3 | 17.4 | 79.4 | -31.8 | 7.1 | Dominates | 15.9 | 17.4 | 57.6 | -24.4 | 5.1 | Dominates |
| **FR in trial** | 32.9 | 15.2 | 85.5 | -37.4 | 8.1 | Dominates | 18.5 | 15.2 | 63.7 | -30.0 | 6.1 | Dominates |
| **eBI** | 22.1 | 8.7 | 52.0 | -21.2 | 4.8 | Dominates | 7.8 | 8.7 | 30.3 | -13.8 | 2.7 | Dominates |
| **TS+FR in trial** | 37.0 | 32.6 | 92.6 | -23.1 | 8.8 | Dominates | 22.6 | 32.6 | 70.9 | -15.7 | 6.7 | Dominates |
| **TS+eBI** | 23.5 | 26.0 | 67.0 | -17.5 | 6.0 | Dominates | 9.1 | 26.0 | 45.2 | -10.0 | 3.9 | Dominates |
| **FR+eBI in trial** | 23.7 | 23.9 | 69.5 | -21.9 | 6.1 | Dominates | 9.4 | 23.9 | 47.7 | -14.5 | 4.0 | Dominates |
| **TS+FR+eBI in trial** | 27.2 | 41.2 | 73.9 | -5.5 | 6.6 | Dominates | 12.9 | 41.2 | 52.2 | 1.9 | 4.5 | € 423 |
| **Netherlands** | **Control** | 6.4 | 0.0 | 5.2 | 1.2 | 0.5 | € 2,247 |   |   |   |   |   |   |
| **TS** | 14.7 | 8.6 | 13.5 | 9.8 | 1.2 | € 8,171 | 8.4 | 8.6 | 8.4 | 8.6 | 0.7 | € 12,758 |
| **FR in trial** | 15.8 | 3.3 | 13.5 | 5.6 | 1.1 | € 5,207 | 9.4 | 3.3 | 8.3 | 4.4 | 0.6 | € 7,998 |
| **eBI** | 10.0 | 0.0 | 9.0 | 1.0 | 0.7 | € 1,542 | 3.6 | 0.0 | 3.8 | -0.2 | 0.1 | Dominates |
| **TS+FR in trial** | 18.6 | 11.9 | 17.0 | 13.5 | 1.7 | € 7,991 | 12.2 | 11.9 | 11.8 | 12.4 | 1.2 | € 10,549 |
| **TS+eBI** | 11.6 | 8.6 | 11.9 | 8.3 | 1.0 | € 8,102 | 5.2 | 8.6 | 6.7 | 7.2 | 0.5 | € 14,124 |
| **FR+eBI in trial** | 11.4 | 3.4 | 11.2 | 3.6 | 1.0 | € 3,789 | 5.1 | 3.4 | 6.0 | 2.4 | 0.4 | € 5,650 |
| **TS+FR+eBI in trial** | 14.2 | 11.9 | 15.2 | 11.0 | 1.5 | € 7,527 | 7.8 | 11.9 | 10.0 | 9.8 | 0.9 | € 10,484 |
| **Poland** | **Control** | 0.8 | 0.1 | 0.0 | 0.8 | 0.0 | € 29,583 |   |   |   |   |   |   |
| **TS** | 2.9 | 0.7 | 0.1 | 3.4 | 1.0 | € 3,345 | 2.1 | 0.6 | 0.2 | 2.5 | 2.1 | € 1,164 |
| **FR in trial** | 2.4 | 3.9 | 0.0 | 6.2 | 0.4 | € 14,887 | 1.6 | 0.0 | 0.1 | 1.5 | 0.8 | € 1,841 |
| **eBI** | 1.4 | 0.1 | 0.0 | 1.4 | 0.2 | € 6,093 | 0.6 | 0.0 | 0.0 | 0.6 | 0.4 | € 1,318 |
| **TS+FR in trial** | 3.3 | 4.5 | 0.1 | 7.7 | 1.2 | € 6,216 | 2.6 | 0.6 | 0.3 | 2.9 | 2.7 | € 1,091 |
| **TS+eBI** | 1.6 | 0.7 | 0.0 | 2.3 | 0.2 | € 14,931 | 0.8 | 0.6 | 0.0 | 1.4 | 0.3 | € 5,385 |
| **FR+eBI in trial** | 1.6 | 3.9 | 0.0 | 5.5 | 0.2 | € 22,929 | 0.8 | 0.0 | 0.0 | 0.8 | 0.5 | € 1,800 |
| **TS+FR+eBI in trial** | 1.8 | 4.5 | 0.0 | 6.3 | 0.2 | € 38,846 | 1.0 | 0.6 | 0.0 | 1.6 | 0.3 | € 5,379 |

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