

Preventing Excessive Alcohol Consumption: Electronic Screening and Brief Interventions (e-SBI)

Summary Evidence Table - Economic Review

| Study | Study Characteristics | Intervention Description | Effect Size | Intervention Costs (2011 US\$) | Intervention Benefits (2011 US\$) | Economic Summary Measure (2011 US\$) |
|---|--|---|--|--------------------------------|---|---|
| <p>Author (Year): Harwood et al. (2009)</p> <p>Study Design: Model</p> <p>Economic Method: Benefits Only</p> | <p>Location: United States (Military)</p> <p>Sample Size: 3 million beneficiaries of TRICARE's Prime Plan</p> <p>Population Characteristics: Aged 18-64 years; 1.2 million active duty service members, 712,000 active duty family members, 1.1 million military retirees and their dependents</p> <p>Time Horizon: One year</p> | <p>Three policies designed to reduce binge drinking:</p> <ol style="list-style-type: none"> SBI administered by primary care provider Raise alcohol prices by 20% on base e-SBI - PATROL (Alcohol Savvy and Drinker's Check-up; data from Drinker's Check Up used) | <p>Change in heavy binge drinking: SBI: -16% Raising Prices: -6.5% in male -4.5% in females e-SBI: -47%</p> <p>Change in infrequent binge drinking: SBI: -14% Raising Prices: -2.5% in males -4.5% in females eSBI: -21%</p> | Not reported | <p>Potential annual savings:</p> <p>SBI: \$143.9 million Active Duty Medical: \$16.7 million Active Duty Non-medical: \$92.6 million Dependents of active duty: \$8.9 million Retirees and dependents: \$25.7 million</p> <p>Pricing: \$65.9 million Active Duty Medical: \$7.8 million Active Duty Non-medical: \$40.2 million Dependents of active duty: \$5.6 million Retirees and dependents: \$12.3 million</p> <p>eSBI: \$136 million Active Duty Medical: \$15.6 million Active Duty Non-medical: \$87.0 million Dependents of active duty: \$8.9 million Retirees and dependents: \$24.5 million</p> | e-SBI has the potential to save the U.S. military \$136 million |
| Author (Year): | Location: | DrinkingLess vs | Revert to drinking | Mean cost per user of | Costs averted per | Benefit:Cost Ratio per |

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| <p>Riper (2008)</p> <p>Study Design: Individual RCT</p> <p>Economic Method: Cost-benefit; Cost-effective</p> | <p>Netherlands</p> <p>Sample Size: 261</p> <p>Population Characteristics: Problem drinkers; mean age: 46 (SD: 9.0); 46% women; 73% Paid employment</p> <p>Time Horizon: One year</p> | <p>online information brochure</p> <p>DrinkingLess is an interactive online self-help intervention structured in four steps:</p> <ol style="list-style-type: none"> 1. Preparing for action 2. Goal setting 3. Behavioral change, and 4. Maintenance <p>Participants receive automated and tailored feedback.</p> | <p>habits below the low-risk drinking criteria:</p> <p>OR: 1.74 (p = 0.3, NS)</p> <p>RD: 0.031, 3.1% (p = 0.296, NS)</p> | <p>the intervention:</p> <p>Drinking Less: \$56.96 Control: \$14.21 Cost difference: \$42.74</p> | <p>capita (DrinkingLess vs control):</p> <p>Direct medical: -\$54.24 (95% CI: -\$174.66, \$66.18)</p> <p>Non-medical: -\$13.02 (95% CI: -\$49.90, \$22.78)</p> <p>Work loss: -\$35.80 (95% CI: -\$368.86, \$298.34)</p> <p>Work cutback: -\$407.91 (95% CI: -\$1,017.61, \$202.87)</p> <p>Total Averted Costs: -\$510.97 (*DrinkingLess results in lower direct medical costs, lower out of pocket medical costs, and lower productivity loss)</p> <p>Net Savings: \$468 (95% CI: -\$334.14, \$1,274.72)</p> <p>Sensitivity Analysis: Elasticities of 0.9, 0.8, and 0.7 for time and production losses due to inefficiency; net savings = \$429.61, \$386.21, \$347.16 respectively</p> | <p>capita = 12.15</p> <p>ICER (cost per percentage increase in those drinking below the recommended levels): -\$15,133.92; median ICER from bootstrap: -\$5,720.52.</p> <p>The intervention increases percentage of people drinking below the recommended levels with lower costs; this dominates the control.</p> |
| <p>Author (Year): Smit et al.</p> | <p>Location: Netherlands</p> | <p>Base-case: no ehealth</p> | <p>Standardized mean differences in pure</p> | <p>Average per participant cost of</p> | <p>Not reported</p> | <p>Cost-utility: Scenario 1 vs base-</p> |

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| <p>(2011)</p> <p>Study Design: Model</p> <p>Economic Method: Cost-utility; cost-benefit</p> | <p>Sample Size: 1.2 million (993,200 men and 222,800 women)</p> <p>Population Characteristics: Aged 18-69 years; Could be classified as problem drinkers</p> <p>Time Horizon: One year</p> | <p>technologies</p> <p>Scenario 1: eHealth interventions added to reach a segment that would have otherwise not been treated</p> <p>Scenario 2: traditional treatments are substituted with ehealth technologies</p> <p>Scenarios were a mixture of the following treatment options:</p> <ul style="list-style-type: none"> • Brief face-to-face • Online brief • Behavioral • Online behavioral • Online therapist-led • Detox and acamprosate • Aftercare and rehab with AA | <p>alcohol intake (mg/day)</p> <ul style="list-style-type: none"> • <u>Brief face-to-face:</u> Heavy drinkers: 0.26 (95% CI: 0.20, 0.32); Hazardous drinkers: 0.32 (0.23, 0.42) • <u>Online brief (DrinkTest):</u> 0.19 (-0.02, 0.40) • <u>Behavioral:</u> Hazardous and Harmful drinkers: 0.34 (0.12, 0.56); Dependence: 0.32 (0.05, 0.59) • <u>Online behavioral (DrinkingLess):</u> 0.31 (-0.69, 1.30) • <u>Online therapist-led:</u> Harmful drinkers: 0.58 (0.29, 0.88); Dependence: 0.59 (0.30, 0.90) • <u>Detox and acamprosate:</u> 0.21 (0.14, 0.29) • <u>Aftercare and rehab with AA:</u> 0.28 (0.20, 0.37) <p>DALYs averted: Base-case: 5,022; 4,984 Scenario 1: 10,319 Scenario 2: 5,000</p> | <p>intervention</p> <ul style="list-style-type: none"> • <u>Brief face-to-face:</u> \$72.31 (Range: \$64.83, \$93.5) • <u>Online brief (DrinkTest):</u> \$12.47 (\$11.22, \$12.47) • <u>Behavioral:</u> \$2,523.35 (\$2,121.91, \$3,179.12) • <u>Online behavioral (DrinkingLess):</u> \$258.07 (\$246.85, \$279.26) • <u>Online therapist-led:</u> Harmful: \$952.49 (\$283, \$1,808.98); Dependent: \$1,590.81 (\$1,220.53, \$1,755.37) • <u>Detox and acamprosate:</u> \$2,244.08 (\$2,019.68, \$2,782.66) • <u>Aftercare and rehab with AA:</u> \$623.36 (\$311.68, \$935.03) <p>Total costs of implementing the range of interventions: Base-case: \$290.5 million; \$291.7 million Scenario 1: \$397.7 million; increased cost of \$107.2 million</p> | | <p>case: \$20,013.49/DALY</p> <p>Scenario 2 vs base-case: Essentially no difference in population health (i.e., same DALYs), but scenario 2 results in a net savings of \$84.8 million</p> <p>Benefit: Cost Ratio: (assuming each DALY averted costs \$50,000): Base-case: 1.06 Scenario 1: 1.62 Scenario 2: 1.52</p> <p>Both extreme scenarios carry the message that widespread introduction of eHealth technologies would help to substantially increase the efficiency of the Dutch healthcare system overall, with a more favorable cost-benefit ratio either way.</p> |

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| | | | | Scenario 2: \$207.0 million; cost savings of \$84.8 million | | |

Abbreviations:

DALY, Disability -adjusted life year

ICER, Incremental cost-effectiveness ratio

RCT, Randomized controlled trial