



EVALUATING THE COST-EFFECTIVENESS OF A SUICIDE BEREAVEMENT SUPPORT SERVICE

*Australasian Evaluation Society Conference
30 August 2012*



the science of knowing



Agenda

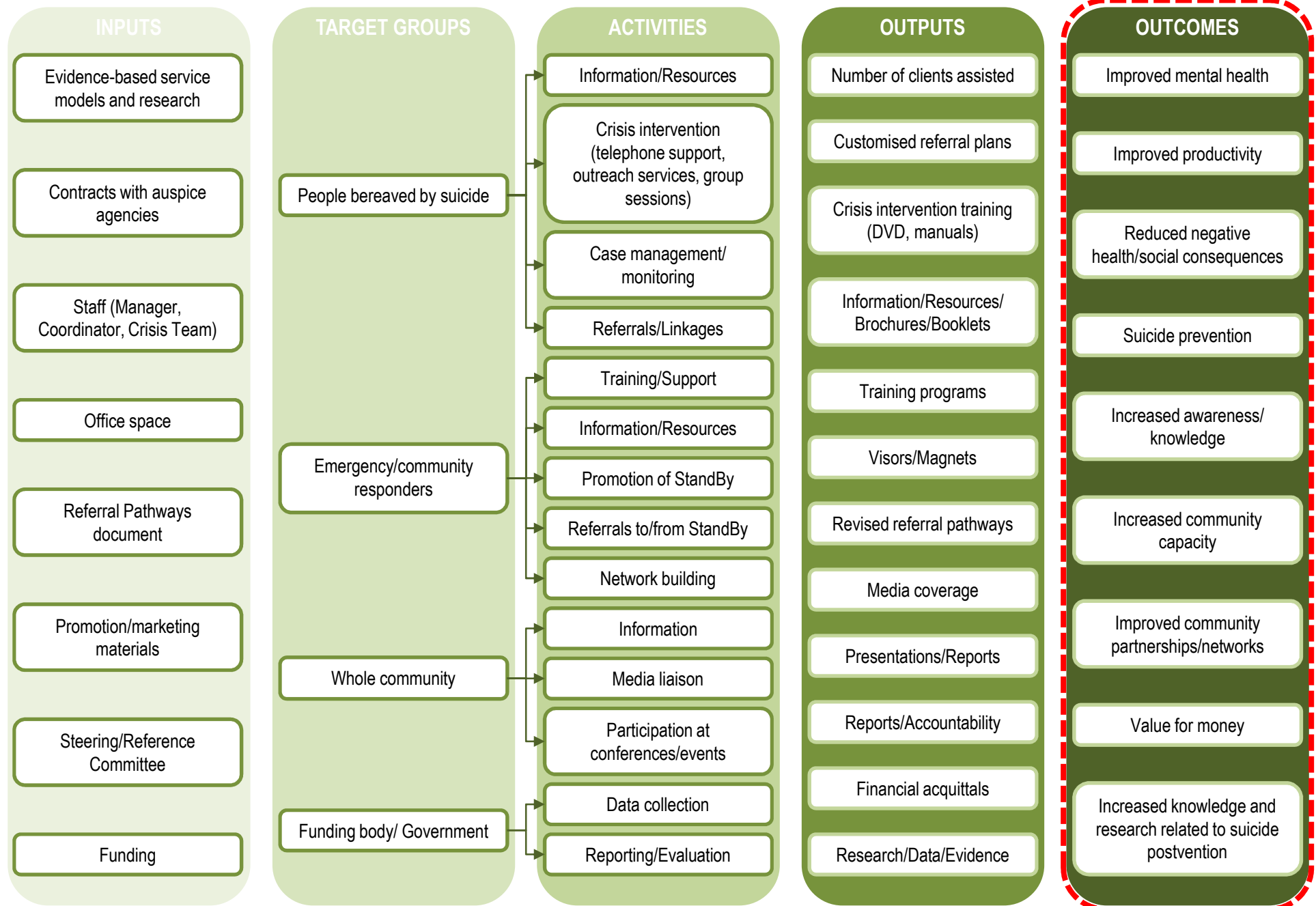
- Objectives of the economic evaluation
- Methodology and evaluation tools
- Results
 - Response rates and sample sizes
 - Benefits of the program
 - Costs of operating StandBy
 - Overall cost-effectiveness of the program
- Key findings of the evaluation
- Next steps

The StandBy Response Service

- A community-based postvention program that provides support and a coordinated response for people who have been bereaved through suicide.
- At time of evaluation, StandBy operated in nine regions:



STANDBY RESPONSE SERVICE – PROGRAM LOGIC





Research questions

1. What are the costs of implementing the StandBy Response Service?
2. What are the costs associated with the absence of the StandBy Response Service?
3. What are the economic benefits of implementing the StandBy Response Service?
4. What is the overall effect of the StandBy Response Service on the total costs to society?



Agenda

- Objectives of the economic evaluation
- Methodology and evaluation tools
- Results
 - Response rates and sample sizes
 - Benefits of the program
 - Costs of operating StandBy
 - Overall cost-effectiveness of the program
- Key findings of the evaluation
- Next steps

What is economic evaluation?

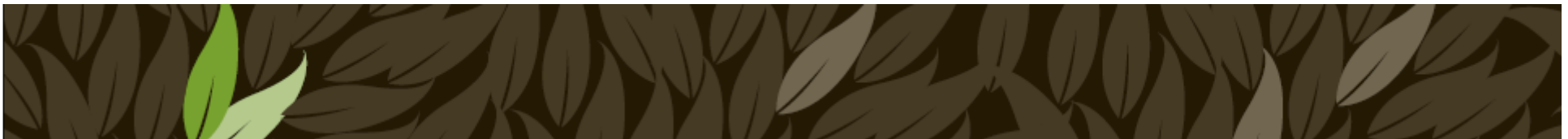
Economic evaluation includes a range of analyses and techniques to compare the costs of a program, intervention or scenario with the benefits.

Type of study	Measurement/ valuation of costs in both alternatives	Identification of consequences	Measurement/ valuation of consequences
Cost analysis	Monetary units	None	None
Cost-effectiveness analysis	Monetary units	Single effect of interest, common to both alternatives, but achieved to different degrees	Natural units (e.g. life-years gained, disability-days saved, points of blood pressure reduction, etc.)
Cost-utility analysis	Monetary units	Single or multiple effects, not necessarily common to both alternatives	Healthy years (typically measured as quality-adjusted life-years)
Cost-benefit analysis	Monetary units	Single or multiple effects, not necessarily common to both alternatives	Monetary units

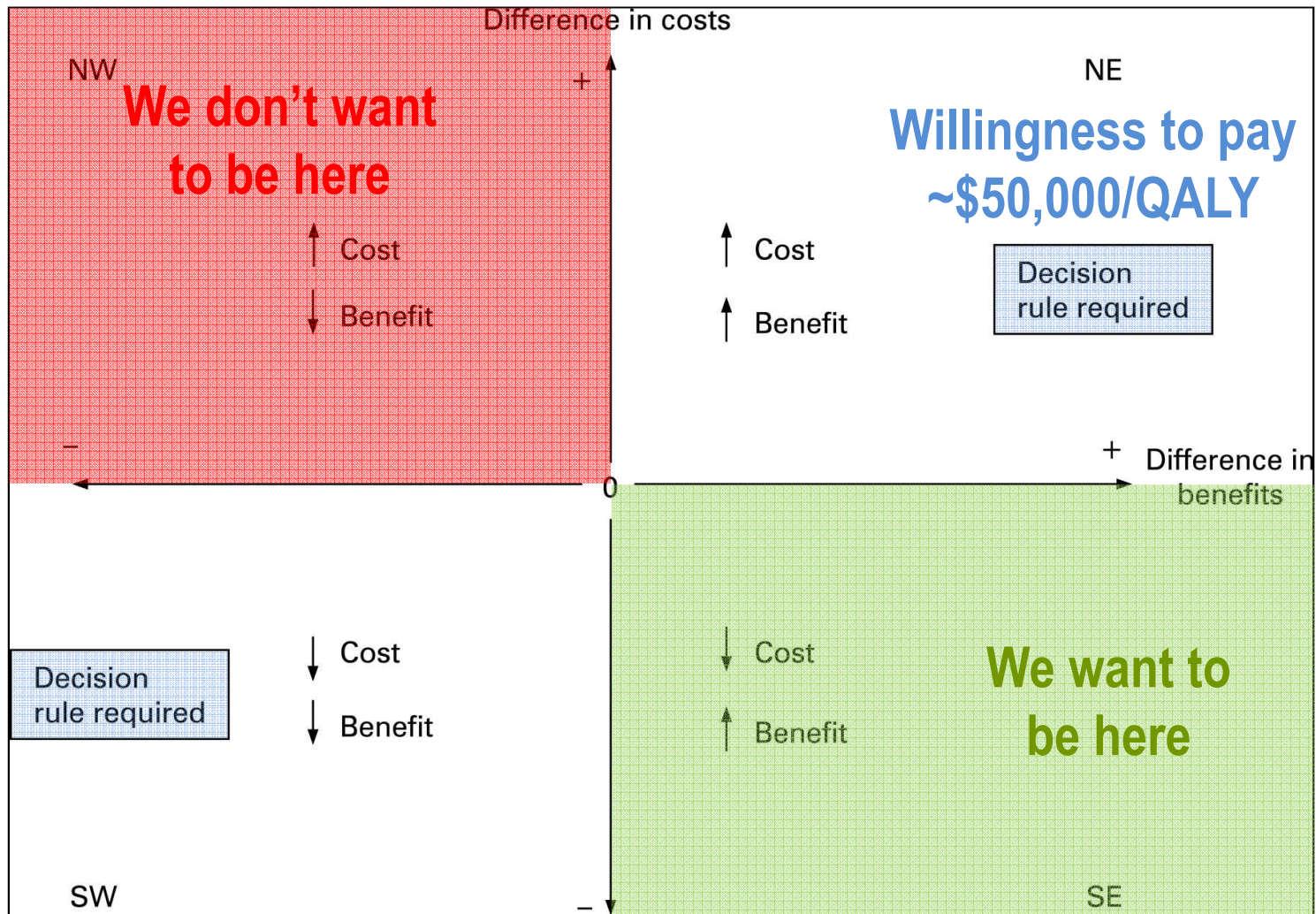
Why is economic evaluation important?



the science of knowing

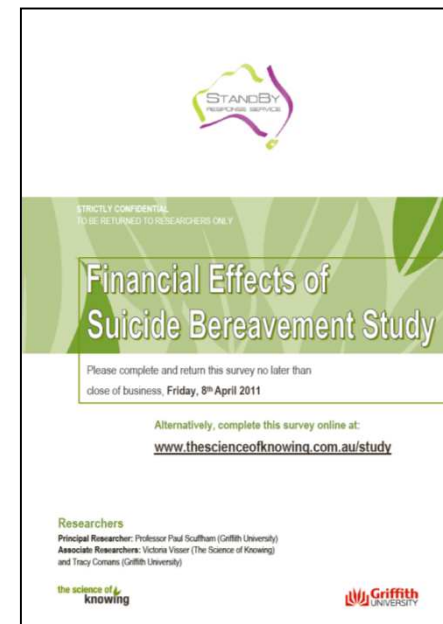


Cost-effectiveness plane



Questionnaire – bereaved people

- **EuroQol (EQ-5D)** – a measure of health and functioning
- **ICEpop CAPability (ICECAP)** – a measure of quality of life
- **Kessler Psychological Distress Scale (K6)** – a measure of psychological wellbeing
- **Suicidal Behaviors Questionnaire-Revised (SBQ-R)** – a measure of suicide ideation and behaviours
- **Health Appraisal Survey (HAS)** – a measure of health service usage and productivity.





Agenda

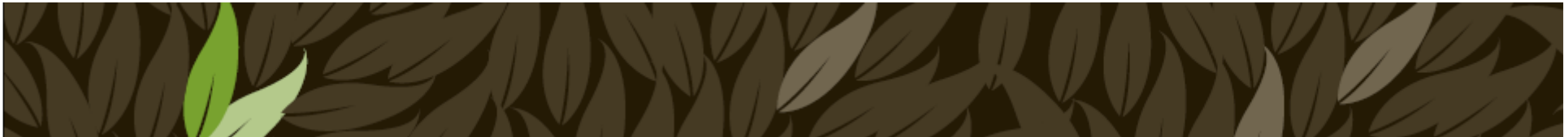
- Objectives of the economic evaluation
- Methodology and evaluation tools
- Results
 - Response rates and sample sizes
 - Benefits of the program
 - Costs of operating StandBy
 - Overall cost-effectiveness of the program
- Key findings of the evaluation
- Next steps

Response rates – Overall

**Response rate from StandBy clients was
21% across all nine sites**

Group	StandBy Clients	Control Group
Number of questionnaires started	96	905
Number of questionnaires completed and valid	90	670
Number of cases in final sample (matched cases and controls)	90	360

**Control group was matched to StandBy
client group to ensure comparability**





Agenda

- Objectives of the economic evaluation
- Methodology and evaluation tools
- Results
 - Response rates and sample sizes
 - Benefits of the program
 - Costs of operating StandBy
 - Overall cost-effectiveness of the program
- Key findings of the evaluation
- Next steps

Benefits of the StandBy program

- **Lower risk of severe psychological distress**, especially within first two years after loss
- Significantly **lower risk of experiencing high levels of suicidality**
- **Higher levels of quality of life**, both in terms of functioning and capability
- Significantly higher quality of life more than two years after loss, particularly for those people experiencing severe psychological distress
- **Lower absenteeism/presenteeism and higher productivity**
- **Less use of health services**, particularly high level services (e.g. specialists, mental health specialists, hospital visits)
- **Consistently better results across all outcome variables** for StandBy clients when compared to control group



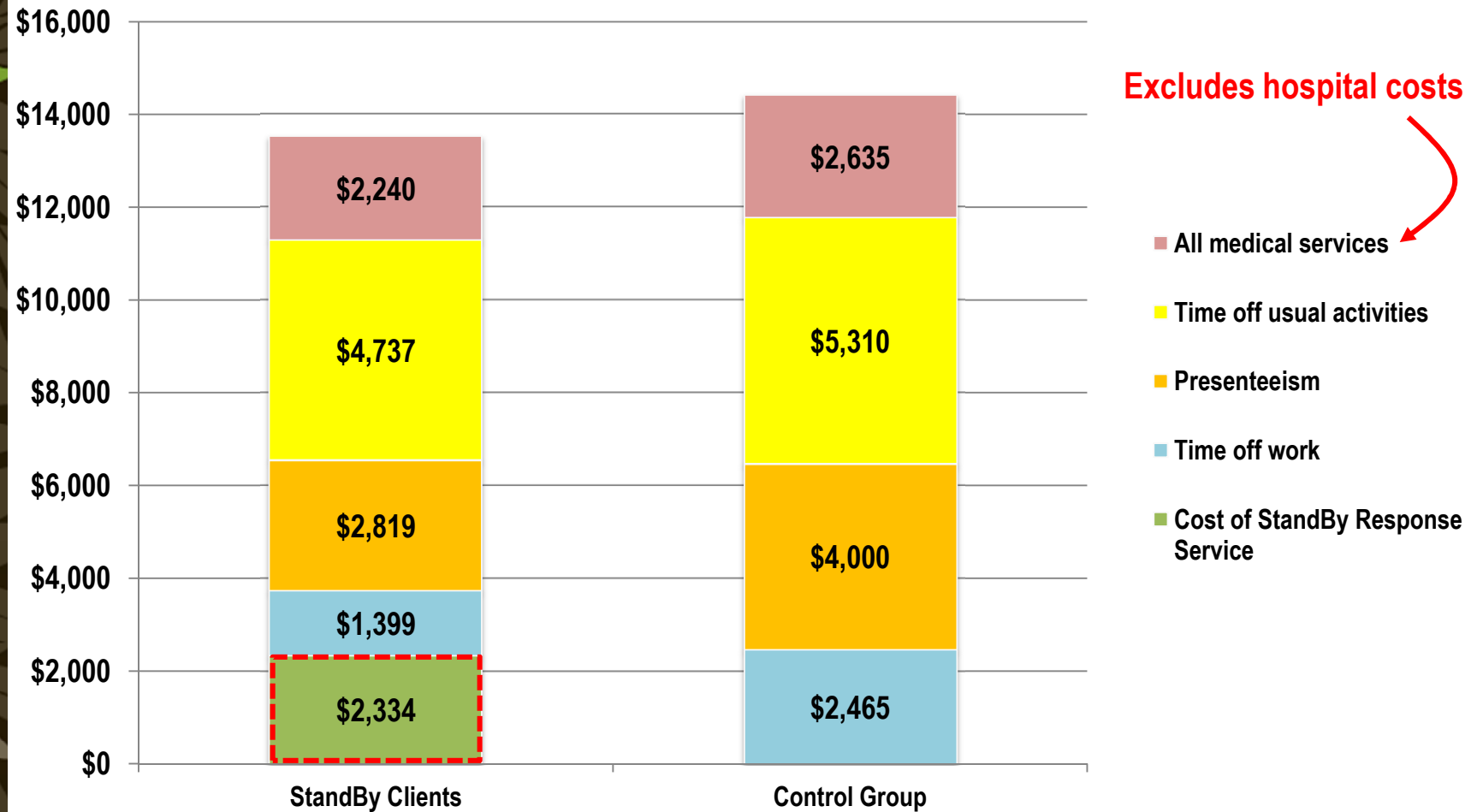
Agenda

- Objectives of the economic evaluation
- Methodology and evaluation tools
- Results
 - Response rates and sample sizes
 - Benefits of the program
 - Costs of operating StandBy
 - Overall cost-effectiveness of the program
- Key findings of the evaluation
- Next steps

Costs to operate StandBy

- Average cost per StandBy client over one year for metropolitan/ regional sites is **\$2334** (*“typical” cost*)
 - Not including Canberra and remote sites
 - Based on allocated budget and client numbers for period April 2010-March 2011
 - Doesn't take into consideration frequency/length of interventions
 - Reliability and validity of client number data (data availability, differences in definition of “client”) – where exact data not available, more conservative estimates were used
- Cost per client is highly variable across sites, ranging from **\$695 to \$11,294** (*includes remote sites*)
- Cost per client tends to be lower for metropolitan sites and higher for remote sites

Difference in costs



On average, StandBy clients incur **\$881.39** less per person than control group

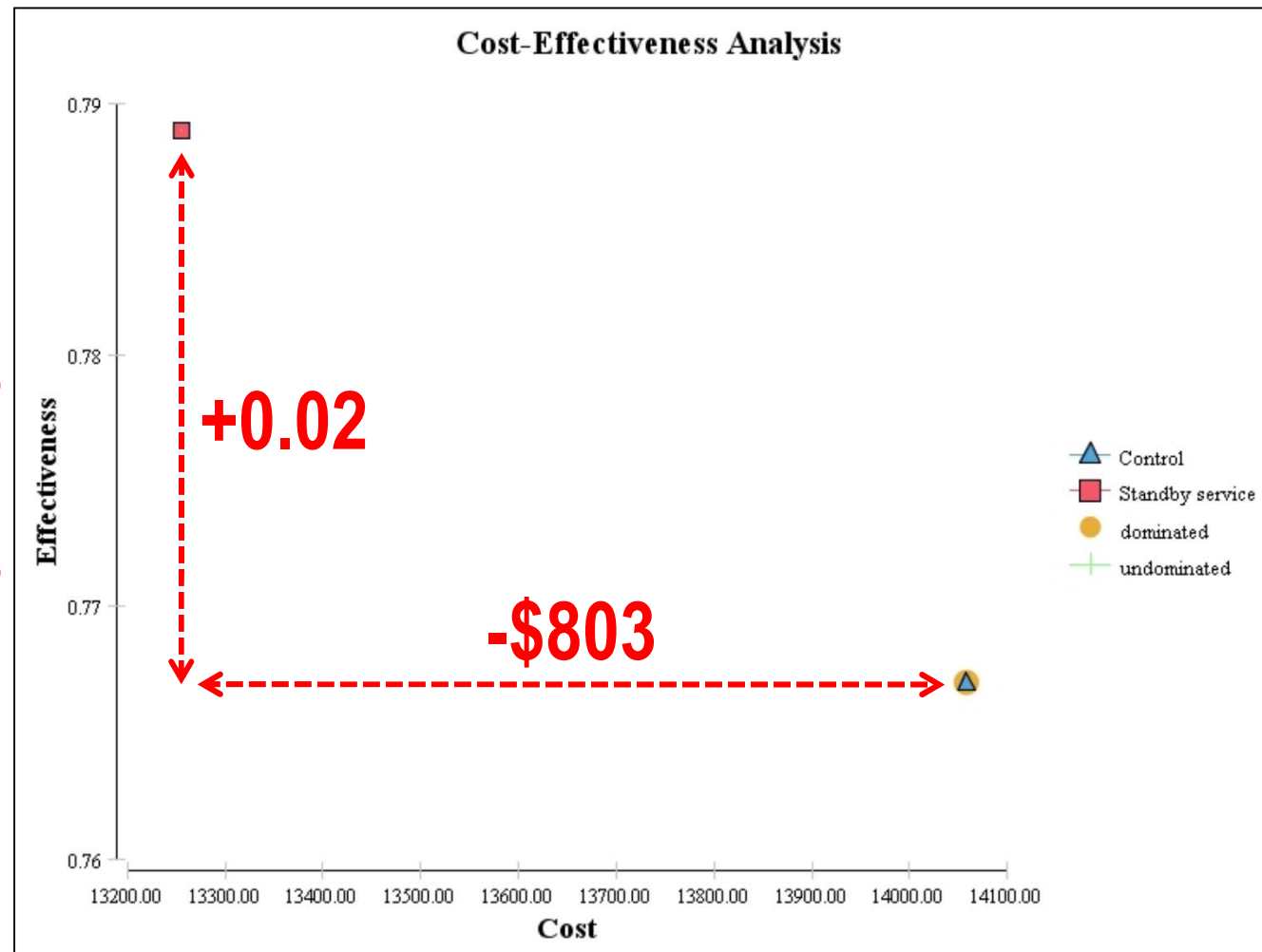


Agenda

- Objectives of the economic evaluation
- Methodology and evaluation tools
- Results
 - Response rates and sample sizes
 - Benefits of the program
 - Costs of operating StandBy
 - Overall cost-effectiveness of the program
- Key findings of the evaluation
- Next steps

Cost-effectiveness of StandBy

Quality of life scores
(EQ-5D)



StandBy costs less and is more effective than the control (i.e. no intervention)

Sensitivity analyses

Cost-effectiveness of the StandBy Response Service	Incremental Costs/ Savings	Incremental Effect	ICER
Base Case (one year analysis)	-\$803.00	0.02	Cost Saving
Sensitivity Analyses			
5 year extrapolation analysis	-\$11,886.00	0.07	Cost Saving
Upper CI of cost of service	\$145.88	0.02	\$6,662.00
Monte Carlo simulation	-\$667.70	0.02	Cost Saving

ICER (incremental cost-effectiveness ratio) =

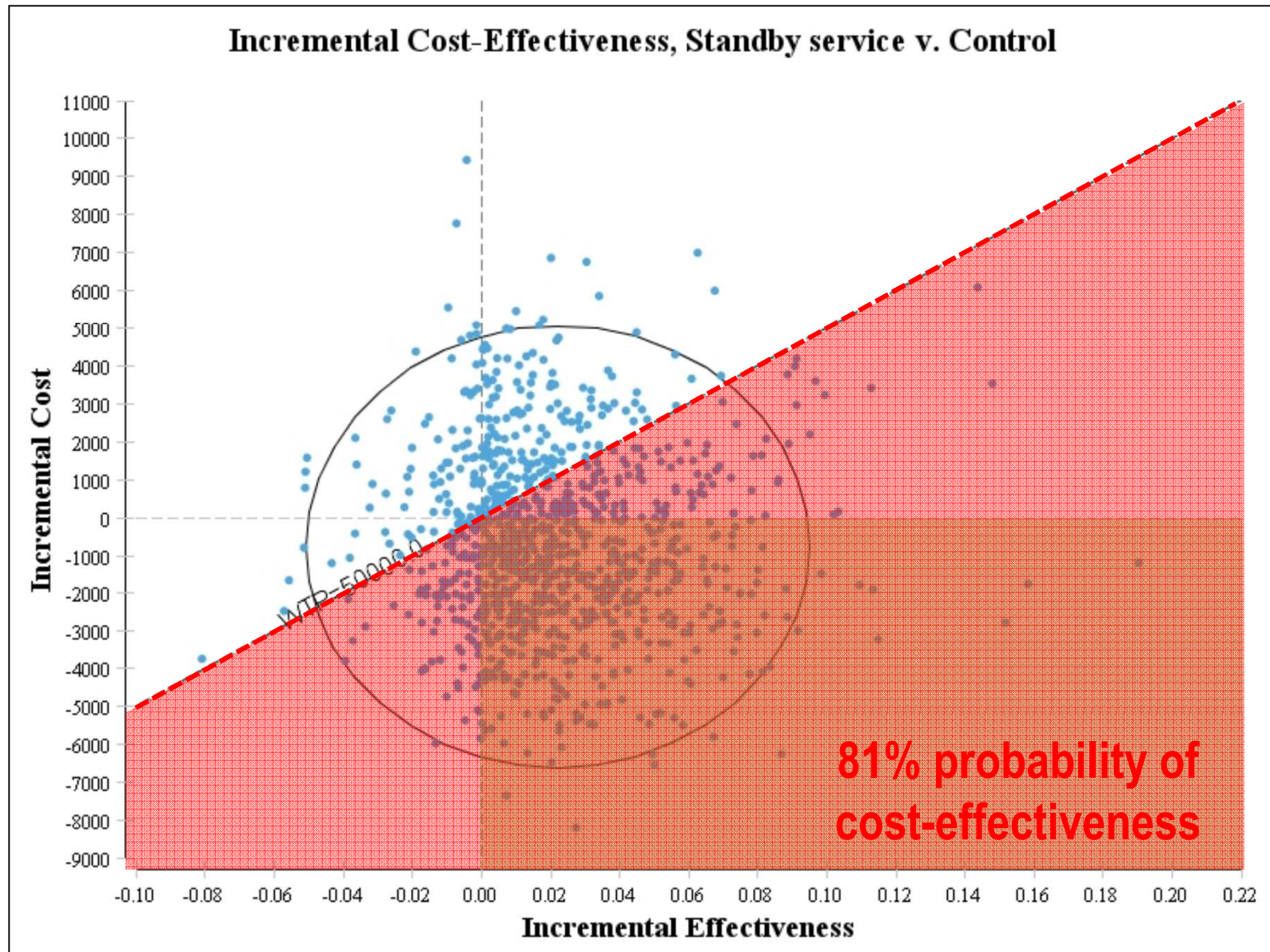
Difference in costs between intervention and no intervention

Difference in health effects between intervention and no intervention

Using the economic model, StandBy saves an estimated \$803 per person and improves quality of life by 0.02

Sensitivity analyses

Monte Carlo simulation





Cost-effectiveness of StandBy

Rural/remote communities

- Participants from very remote Indigenous communities were not included in the evaluation.
- We know that operating programs in rural/remote areas is considerably more expensive than metropolitan areas.
- Average cost per StandBy client was factored up for rural/remote sites:
 - **expected cost per client = \$3701**
- Results show that Kimberley sites are cost-effective, while Pilbara site may not be cost-effective at this stage.



Agenda

- Objectives of the economic evaluation
- Methodology and evaluation tools
- Results
 - Response rates and sample sizes
 - Benefits of the program
 - Costs of operating StandBy
 - Overall cost-effectiveness of the program
- Key findings of the evaluation
- Next steps

Key findings

- Bereavement by suicide results in **immense negative impact**
 - Reduced physical and mental health – functioning, capability, psychological distress and suicidality
 - Reduced quality of life
 - Decreased productivity
 - Increased health service usage
- Quality of life likely to be **lower than cancer patients** and recovering cancer patients and much lower than general population
- **Large potential cost to society** – employers, communities, health services, government



Key findings

- Postvention support through StandBy **measurably and consistently improves health and wellbeing** of people bereaved by suicide
- StandBy is cost-effective model for providing support – **potential cost savings to society of approximately \$800 per person per year** through increased productivity and lower health service usage
- **Several other important social benefits**
 - improved quality of life
 - improved physical and mental health
 - increased community capacity and awareness
 - potential reduction in the number of future suicides



Key findings

- There are approx. 1,800 suicides per year in Australia – conservative estimate of **approx. 10,800 people bereaved by suicide each year**
- If all supported by StandBy = **potential cost saving of \$8.6M per year** (at \$800 saving per person)
- Projected cost analyses predict a **potential cost saving of \$128M** for this cohort over a five-year period

NOTE: Cost-effectiveness calculations take into consideration the costs of operating the StandBy program





Challenges and limitations

■ Limitations

- Self-selected samples and self-reported data
- Cross-sectional data, not randomised
- Splitting groups – small sample sizes
- Matching StandBy and control group samples
- Impact of differences in service model

■ Challenges

- Short timeframe for the evaluation reduced capacity for extensive consultation with sites and stakeholders
- Difficulties in data collection – delays, reduced response rates, data collection practices



Agenda

- Objectives of the economic evaluation
- Methodology and evaluation tools
- Results
 - Response rates and sample sizes
 - Benefits of the program
 - Costs of operating StandBy
 - Overall cost-effectiveness of the program
- Key findings of the evaluation
- Next steps

Next steps – Using the results

- **First known economic evaluation of a postvention service and one of the largest samples of people bereaved by suicide**
- **Disseminating the evaluation findings**
- **Building the evidence base** – e.g. peer-reviewed publications
- **Continuous improvement of the StandBy model** – e.g. increasing uptake of the service, tailoring the model for different communities/groups, applicability to other issues
- **Comparing the results with alternative models for postvention and other health interventions**

Next steps – Future research opportunities

- **Long-term impact of suicide bereavement** – comparing different groups (e.g. different relationships, risk factors for complicated grief) – could assist in targeting the StandBy program to assist those who most need it and where benefits will be greatest
- **Impact of StandBy for other client groups** – e.g. emergency services personnel, health services, other service providers, workplaces, schools, community groups, training programs
- **Culturally appropriate, ethical research** into the impact and cost-effectiveness of StandBy for known high-risk groups (e.g. Indigenous and CALD clients and other minority groups)

Acknowledgments

Department of Health and Ageing

United Synergies Ltd

StandBy auspice agencies

StandBy Reference Committees

Clients and people bereaved by suicide





EVALUATING THE COST-EFFECTIVENESS OF A SUICIDE BEREAVEMENT SUPPORT SERVICE

Thank you for your attention



the science of knowing