



## Benchmarking road safety success: Issues to consider

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### ABSTRACT

Success in social marketing is rarely clear cut and even more rarely believed to have been achieved. Social marketing practitioners are under increasing scrutiny to benchmark efficiencies of social change programs to achieve 'success' outcomes. Using road safety as a case study, this paper addresses the complex nature of success within a social marketing context. First, we discuss the conundrum facing road safety in articulating 'success' when at policy level success is quantified objectively, yet at a community level perceptions of system failure are equated with individual death. Methodologically we apply comparative empirical approaches to examine perceptual versus objective road safety outcomes. The paper concludes with a discussion and proposal of alternate strategies for measuring programmatic success, and raise issues concerning the longevity of developing competitive and sustainable benchmarks.

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### 1. Introduction

The growth of social marketing as a complement to alternate social change approaches has accelerated over the last two decades (Andreasen, 2006). Despite much discussion concerning social marketing's role, techniques and extension to the digital age (Andreasen, 2006; French and Blair-Stevens, 2006; Fry, 2007; Dann et al., 2007) there is surprisingly little examination of what constitutes 'success' beyond a broad benchmark of increasing 'good' behaviour while 'decreasing' bad behaviour. In an era where performance outcome is critical to ongoing funding social marketing practitioners are increasingly under scrutiny to not only report campaign strategy but to evaluate and benchmark campaign outcomes as a measure of social change efficiency and effectiveness.

One such area that has a history of recording performance metrics is that of road safety. Road safety in Australia is unique in that despite recent adoption of social marketing as a strategy to combat risky driving behaviour, performance metrics in the form of fatality trend data have been recorded since 1925 (Peder et al., 2004). In spite of overwhelming indications that road safety strategy initiatives have achieved significant successes over past 35 years, road safety faces a continuing situation where definitive 'success' is rarely achieved, 'failure' is enduring and the perceptual outcome of road safety strategy is represented as a 'crisis' situation in mainstream media. This scenario represents a conundrum for road safety practitioners. In many ways, articulating success where mortality figures represent the outcome of behaviour emphasises the conflict road safety faces. The reality of personal tragedy pre-

sents a perception of 'failure', while the objective statistical analysis of strategy implementation simultaneously suggests 'success' of that same campaign. As such, are road safety initiatives able to benchmark and achieve successful outcomes? In answering this question, the paper is divided into three sections. The first section examines the relationship between objective and perceptual success paying particular attention to the key epistemological issue of whether 'success' is a possible outcome for road safety. The second section applies comparative empirical approaches to examine perceptual versus objective road safety outcomes. The paper concludes with a discussion and proposal for alternate measures of success.

### 2. 'Success' in road safety

Marsh and McConnell (2008) argue the nature of success is multifaceted and complex. They specify the evaluation of success outcomes must include consideration of three dimensions: the process (policy development), the program (interventions), and the political environment (media commentary). Inherently, what constitutes success differs according to the perspectives of key participants, observers and the policy process. While an evidence-based perspective provides an objective measure of success, in many ways the evaluation itself is socially constructed and politically articulated. Thus, any attempt to grapple with the nature of success must take into consideration the complexity and interrelationships between policy, program and the environment. In particular, the conundrum surrounding the articulation of success in road safety is exacerbated at all three levels of Marsh and McConnell's (2008) framework. It would seem that conceptualisation of

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success differs across these sectors of the road safety system, despite each sector individually aiming to benefit society in the long run.

At a policy level road safety is guided by the philosophy of Zero Tolerance which embodies the principle of preventable death. Zero Tolerance is driven by two ethical rules: 'Life and health can never be exchanged for other benefits within society' and 'Whenever someone is killed or seriously injured necessary steps must be taken to avoid a similar event' (Tingvall and Haworth, 1999). Implicit within the model is that road-related fatalities should not be accepted as inevitable, that priority is given to the preservation of human life, and that zero fatalities are not only possible but is an achievable outcome of strategy implementation (Smith, 2000). Within this model success is construed as zero deaths within the road system. While visionary, a discrepancy exists between the objective target of zero deaths and the capacity of the road system to absorb human error. Despite controlling for key factors that influence the probability of road fatalities eventuating (e.g., road infrastructure improvements, vehicle modifications, education and attitudinal factors) Zero Tolerance lacks consideration that a percentage of road deaths are attributed to compounding factors such as luck, poor mechanical conditions, random factors, environmental intervention and non-controllable circumstances that are beyond the control of the road system. Although due care is taken to create a safe road system there continues to remain a margin where road death and serious injuries cannot be prevented.

While Zero Tolerance offers an overarching philosophical perspective, the National Road Safety Strategy (NRSS) is the policy framework guiding road safety program implementation across State and Territories within Australia. At a program level, articulation of road safety success is construed objectively and is generally expressed in the number of collisions, casualties and fatalities that occur in the transport system. The NRSS aims to reduce the road fatality rate per 100,000 population by 40% by 2010 (Australian Transport Council, 2006). Specification of a target acknowledges an objective benchmark to evaluate the relationship between program implementation and performance. Yet, there is a conflict between the NRSS at the program level and the principle of Zero Tolerance at the policy level. Acceptance of a 40% objective benchmark acknowledges tolerance of a residual road toll within a system that aims for a zero road deaths. Although the idea of promoting a zero road toll appears to be supported in principle, the ability of Vision Zero to achieve its outcome is challenged by and is a challenge to current practice. At policy level the magnitude of this discrepancy has impact on the articulation of success within a road safety context. Despite the implicit underlying rhetoric of Zero Tolerance advocating a zero toll, there is discrepancy between the vision *per se* and the implementation of the vision through the NRSS framework.

Adjunct to the issue of aligning a visionary perspective with implementation strategy is the interaction between goal setting and measurement of performance efficiencies. Elementary performance metrics indicate setting targets is critical to benchmarking strategy against outcomes (Ambler, 2000). In road safety, the setting of attainable targets at the program level is especially crucial. Yet, the nature of road safety is that positive achievement in any number of successive years may be overshadowed by a single year where a target is not met. The precursor to the Queensland 'Enough is Enough' campaign was an increase in road fatalities of 311 in 2004 to 330 in 2005. Despite program implementation, Queensland road fatalities stood at 336 in 2006. The campaign was consequently abandoned for not meeting targets. Similarly, by August 2006 the projected NRSS fatality rate was targeted at 7.0 fatalities per 100,000 population. The actual rate was 7.9 per 100,000 (Australian Transport Council, 2006). While application of objective metrics to road safety enables evaluation of the relationship be-

tween performance and intervention implementation, target setting requires translating return on investment into the compliance with behaviour, adherence to long-term behaviour change, as well as integration of individual failures amidst aggregated success. In an environment where the population of licensed drivers is increasing, and where road infrastructure, vehicle capacity for both safety and speed, and driver education and knowledge is improving, is there a limit to substantially reducing road fatalities? Or has road safety met, or almost met, its saturation point? Is road safety in maintenance mode where objective road toll statistics may not necessarily reduce but may, in actual fact, fluctuate? These questions are asked in hindsight of not achieving projected targets.

Marsh and McConnell (2008) identify the political environment as a third dimension influencing the conceptual nature of success. In particular, the media is cited as a key contributor influencing the perception of success at a community level. Marsh and McConnell (2008) argue that environmental impacts, such as the media, influence an individual's judgement as to whether road safety is in a state of 'success' or 'failure'. The concept of 'perceptual failure' is the subjective belief that an intervention program has failed to achieve an acceptable level of success due to the visibility of incidents of failure. Road safety is an invisible benefit, with road safety failure being a visible and visual spectacle. Consequently, road trauma has a clearer match with Tversky and Kahneman's (1982) heuristics of availability where the presence of a highly memorable event is more likely to be recalled than mundane information associated with the event, or the absence of the event. The single photograph of a wrecked car has the ability to portray the inevitable perception of failure in an emotive and powerful light. Thus, the framing of media reports and frequency of reports over time influences the ease of which recall of road safety success or failure can be bought to mind for estimation of the probability of that behaviour occurring. The framing of the media message as either a loss-frame (i.e., negative positioning) or a gain-frame (i.e., positive positioning) also influences judgements of failure/success and non-achievement/achievement. Tversky and Kahneman (1982) suggest that the availability heuristic is effective not only through ease of recall or imagination, but also because remembered images are connected with affect. Thus, long-term portrayal of road safety in the media with vivid images and negative positioning cues biases probability judgements where perceptual failure wins against perceptual success.

The above analysis suggests the conceptualisation of success within road safety is problematic. Articulating success in road safety requires a balancing act between macro-level analysis of longitudinal objective-based statistics, consideration of the reality of personal tragedy at the micro-level, as well as communicating road safety effectiveness (i.e., perceptual success) in the media at a broader community/social level. Yet is road safety able to articulate overall program success despite the occurrence of failure at an individual level? The next section addresses this question putting forward two propositions as a means to verify relative levels of success (i.e., perceptual versus objective) of road safety campaigns.

### 3. Methodology

A two part methodology was implemented to verify relative levels of success of road safety campaigns. Study 1 evaluates the perceptual success of road safety by analysing road safety media representation. Study 2 evaluates objective success by re-analysing road safety metrics taking into consideration population increases. The period of analysis from 1996 to 2007 was bounded by access to newspaper data for mapping media reporting of road safety outcomes, and provides a longitudinal snapshot of road safety intervention outcomes.

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