Project Salmon (France & Australia)

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Optimising international doping control systems: A systems analysis of doping controls in Cycling and Football codes

This project aims to identify opportunities to strengthen the current system of doping controls in elite French cycling and four football codes in Australia. Doping is a widespread problem in sports globally, yet in all our attempts to curb doping it remains prevalent in sport. A research avenue that hasn't yet been explored is the use of systems theory and associated methods (which examines the interactions between people, and a range of organisational and technological factors that influence beliefs, decisions, and behaviours) to understand the system wide influences on doping in sport. By applying this methodology, we will for the first time be able to identify where in the system to apply interventions to assist in the prevention of doping in cycling and the football codes.

The Systems Theoretic Accident Model and Processes (STAMP) framework will be used to develop a control structure model for all sports during structured workshops with subject matter experts from elite cycling (France) and football codes (Australia). According to STAMP, adverse events occur when interactions between systems components are not controlled through managerial, organisational, physical, operational and manufacturing-based controls. Doping should therefore be managed through a hierarchy of controls and feedback mechanisms, and instances of doping will result when the behaviour of athletes, coaches, etc is not adequately controlled.

Prediction of doping control failures

The Systems Theoretic Process Analysis (STPA) method is a proactive risk assessment method that is used to predict control failures. STPA will be used in conjunction with the STAMP control structure model to undertake a systemic risk assessment to identify the range of potential control failures that can prevent existing doping controls from working.

Doping control system design

The outputs from phases 1 and 2 will be used as part of a design workshop whereby recommendations for new systemic doping controls will be developed, using a systems design tool, the Sociotechnical Systems Design Toolkit (STS-DT), and involving subject matter experts (SMEs).