

## **Developments in Avalanche Forecasting and Other Prevention Measures and Their Potential Effects on Avalanche Fatalities**

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Despite the ever-increasing attractions of backcountry and off-piste winter sports as well as the ever more heavily frequented mountain routes in Switzerland, the trend of avalanche fatalities is slightly decreasing. In this empirical study, we present the developments in avalanche accident prevention methods throughout last 40 years in Switzerland. In five-year steps, from 1968/69 until 2007/08, the developments in Swiss avalanche forecasting, the change and expansion of informational products, their frequency, presentation and distribution are presented. These are seen alongside with the developments in further prevention measures such as education, rescue, equipment and human factors. This series of developments is compared to a total of 989 avalanche fatalities in the backcountry and off-piste area as well as on ski runs and on auto routes. Catastrophic avalanche situations and victims thereof are not taken into consideration since the time frame of the analysis is too short. A mix of qualitative and quantitative analysis aims to depict the changes and trends over the 5-year steps. Positive and negative trends in avalanche fatalities are opposed to developments and reversals of trends in avalanche prevention. The mostly qualitative study rather offers a basis for discussion than conclusive scientific results on this complex topic. However, it can serve as a framework for individual forecasting services or countries to draw up a comparison of trends in avalanche accident prevention methods and avalanche fatalities.