Main Outcome Measures Independent risk factors associated with all MEs (both injury- and illness-related) using race day factors and individual self-reported medical history (allergies and medical conditions/medication use) were investigated using a multivariable model with a Poisson distribution, reporting the prevalence ratio (PR: 95% CI).

Results Over 5 years 1,749 medical encounters were recorded. Independent risk factors associated with all MEs were: older females (males 31–40 years vs females >50 years, 0.6: 0.4–0.8, p = 0.0017; males 41–50 years vs females >50 years, 0.5: 0.4–0.7, p = 0.0002; males >50 years vs females >50 years, 0.6: 0.4–0.8, p = 0.0008), slower race pace (7<8 min/km vs 8<9 min/km, 0.8: 0.7–0.9, p = 0.0044) and self-reported medical conditions/medication use (no history vs. medical condition/medication use, 0.7: 0.6–0.9; p = 0.0082).

Conclusion A self-reported history of a medical condition/medication, older females, and slower runners were risk factors associated with MEs during/immediately after the 90km Comrades ultramarathon. These data support initiatives to introduce pre-race medical screening, which could then form the basis for the design and implementation of prevention programs to manage risk of MEs at these events.