Determinants of Glycemic Control in MiniMed 780G Users

The Impact of Optimal Settings, User Behavior, and Patient Characteristics

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Study aim

Evaluate the relative impact on glycemic outcomes

- Optimal settings*
- SmartGuard use
- Bolus frequency
- Temporary target use

*Optimal settings: target 5.5 mmol/L (100 mg/dL), active insulin time 2 hours

Methods

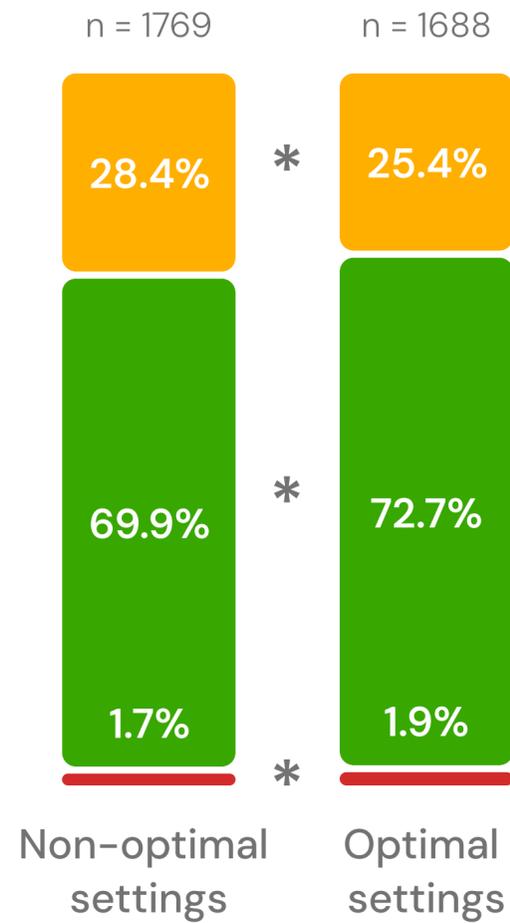1. 2,902 MiniMed 780G users of three diabetes clinics in the Netherlands
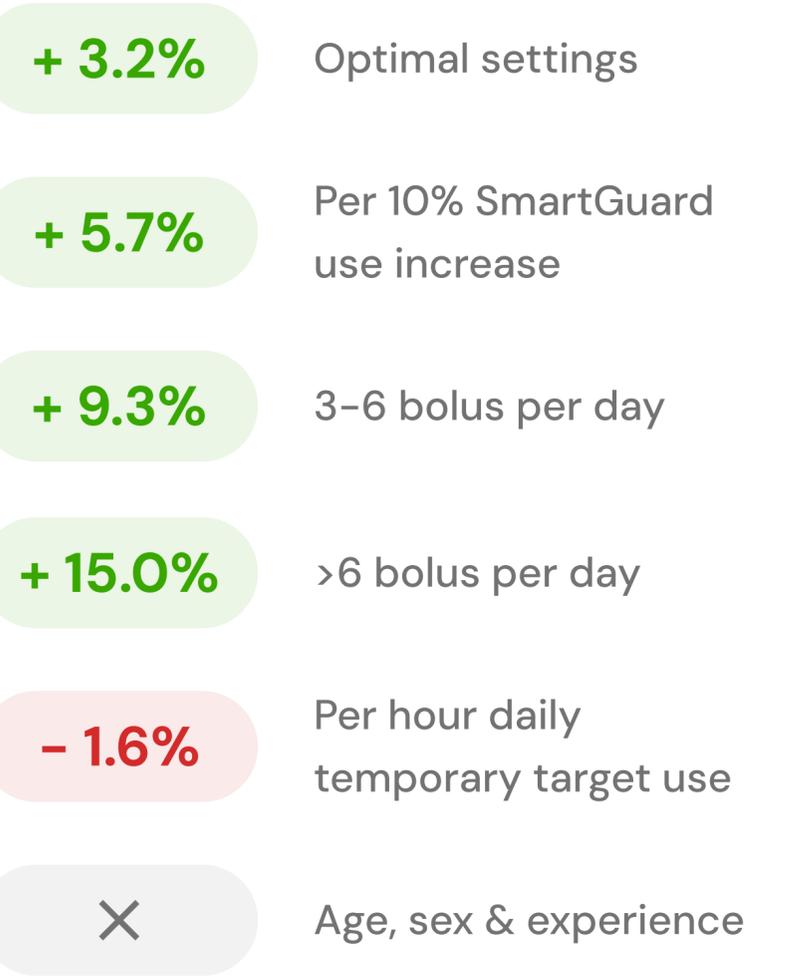2. CGM metrics per month
3. Multivariable linear regression

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Results

Optimal settings criterion

n = 1769 | n = 1688

Non-optimal settings	Optimal settings
28.4%	25.4%
69.9%	72.7%
1.7%	1.9%

SmartGuard criterion

n = 2255 | n = 1777

SmartGuard use <95%	SmartGuard use ≥95%
28.1%	23.7%
69.9%	74.7%
2%	1.6%

Both criteria

n = 2568 | n = 1020

Others	Optimal settings and SmartGuard use ≥95%
27.6%	21.8%
70.6%	76.5%
1.8%	1.7%

Regression analysis

n = 2902

+ 3.2%	Optimal settings
+ 5.7%	Per 10% SmartGuard use increase
+ 9.3%	3–6 bolus per day
+ 15.0%	>6 bolus per day
– 1.6%	Per hour daily temporary target use
✕	Age, sex & experience

Conclusion

The best glycemic control with the MiniMed 780G system is achieved through a comprehensive approach combining:

Optimal settings

Prolonged SmartGuard use

Frequent bolusing

Temporary target use

Study on increasing optimal settings use by implementing a standardized workflow

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