SWITCH STUDY

The SWITCH Study: Sensing With Insulin pump Therapy to Control HbA1c.

- 17-month multicenter RCT cross-over study
- 8 centres, 7 countries
- 185 subjects assessed, 153 randomised
- 72 children, 81 adults

★ Pediatric centres; Denmark, Slovenia, Luxembourg, Italy

★ Adult centres: Spain, Austria, Netherlands, Denmark

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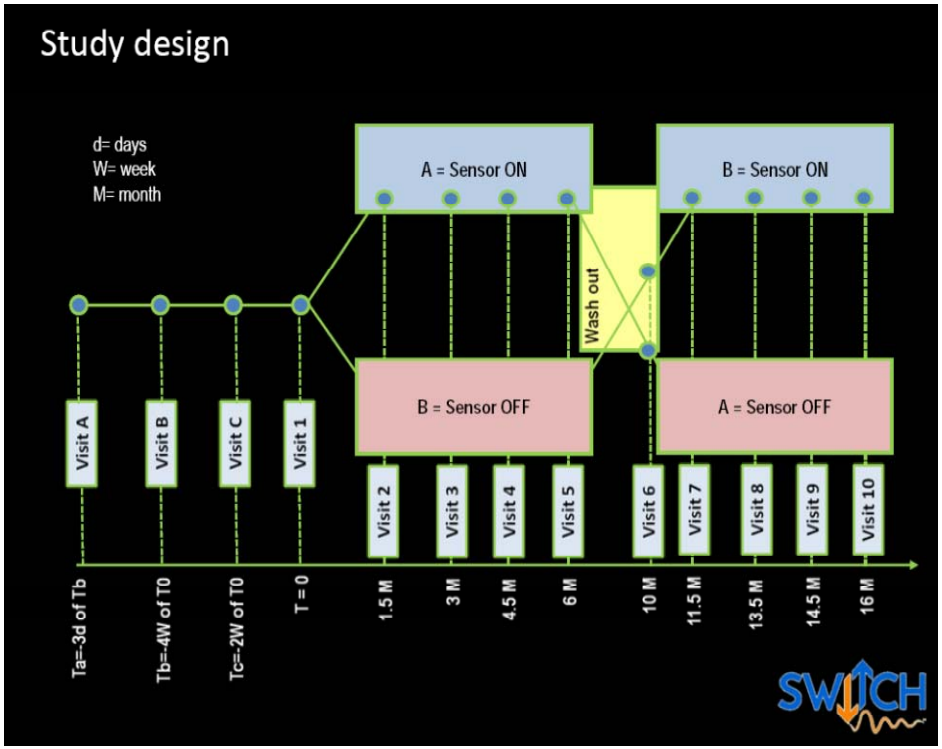

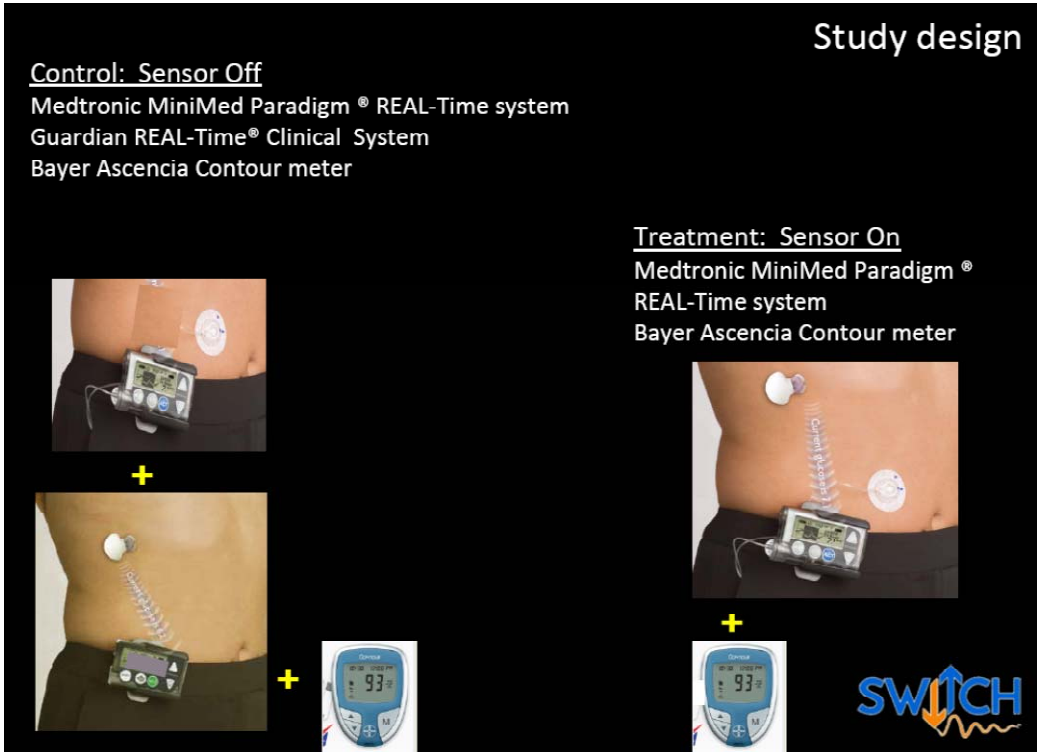

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Results: HbA1c is significantly decreased with the addition of CGM to CSII.

Population	A1c drop	Std Error	95% CI	P-value
Overall	-0.43	0.059	0.32-0.55	<0.001
Children (mean age = 12.4y)	-0.46	0.100	0.26-0.66	<0.001
Adults (mean age = 27.9y)	-0.41	0.064	0.28-0.53	<0.001

This significant decrease was observed in the overall group and in age-related subgroups.

1 % reduktion i HbA1c medfører et fald i risiko for følgesygdomme på ca. 30 %

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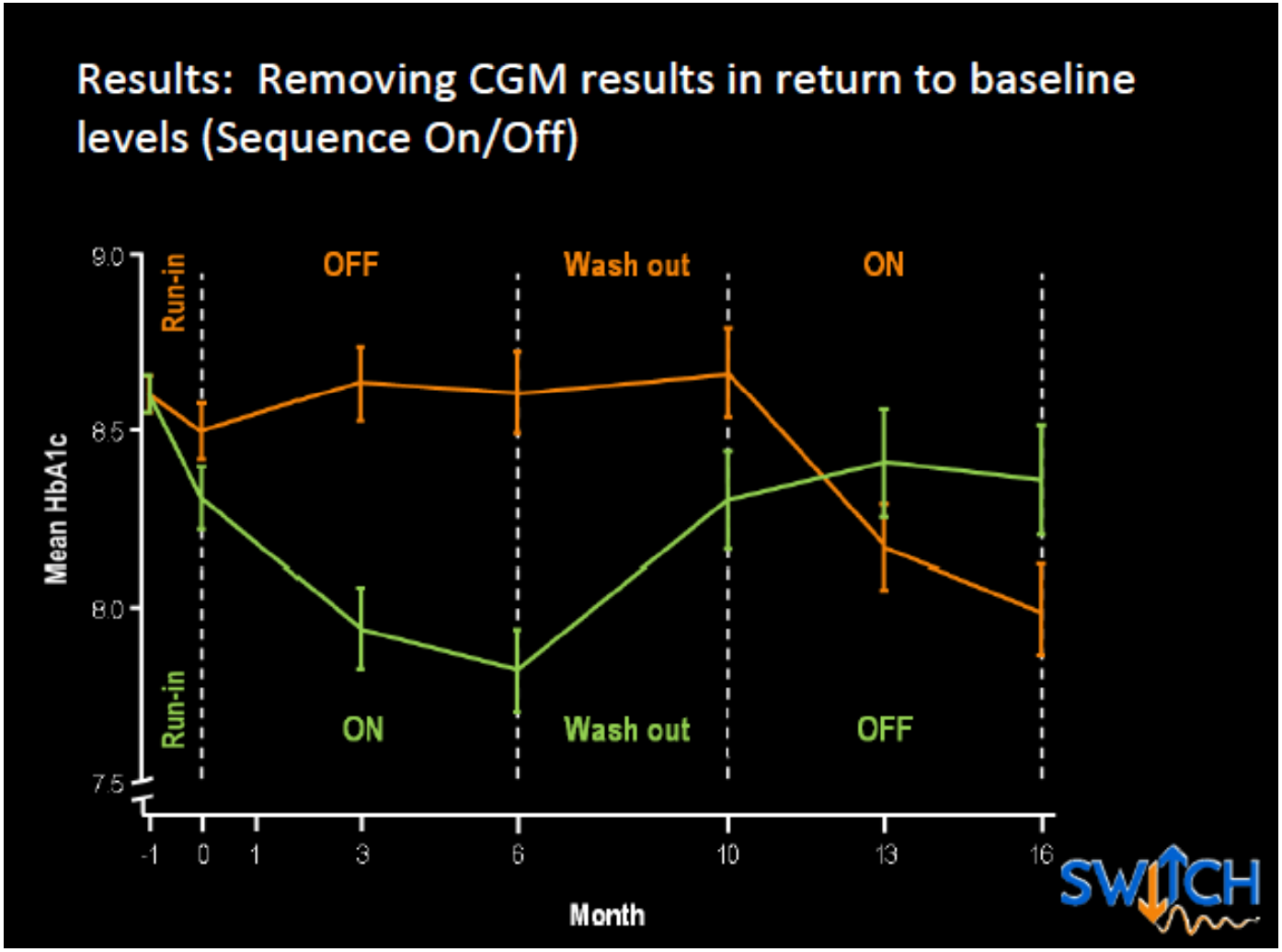
Results: Removing CGM results in return to baseline levels (Sequence On/Off)
Mean HbA1c
9.0
8.5
8.0
7.5
Run-in
OFF
Wash out
ON
Run-in
ON
Wash out
OFF
-1
0
1
3
6
10
13
16
Month
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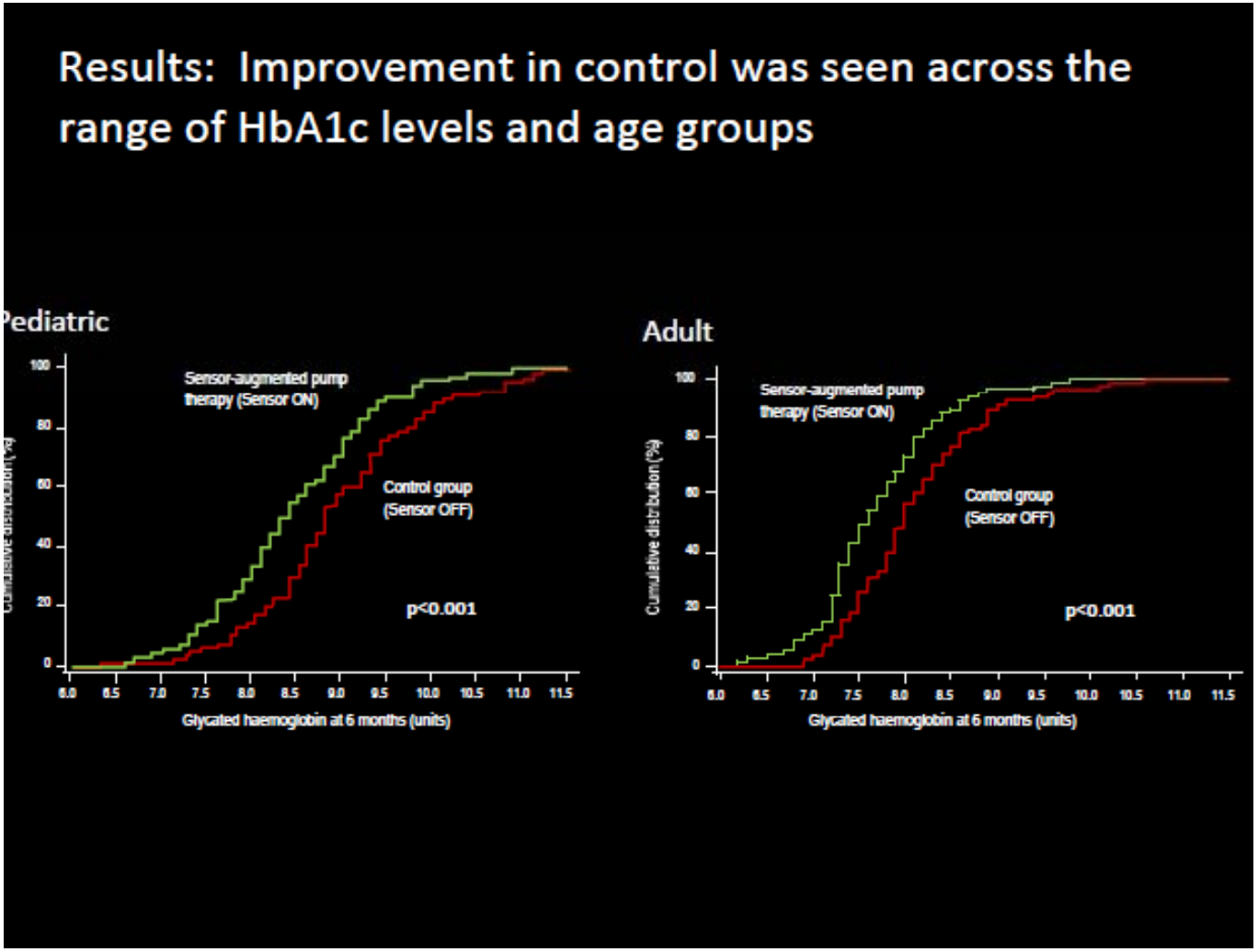
Results: Improvement in control was seen across the range of HbA1c levels and age groups
Pediatric
Sensor-augmented pump therapy (Sensor ON)
Control group (Sensor OFF)
p<0.001
Glycated haemoglobin at 6 months (units)
Adult
Sensor-augmented pump therapy (Sensor ON)
Control group (Sensor OFF)
p<0.001
Cumulative distribution (%)
Glycated haemoglobin at 6 months (units)

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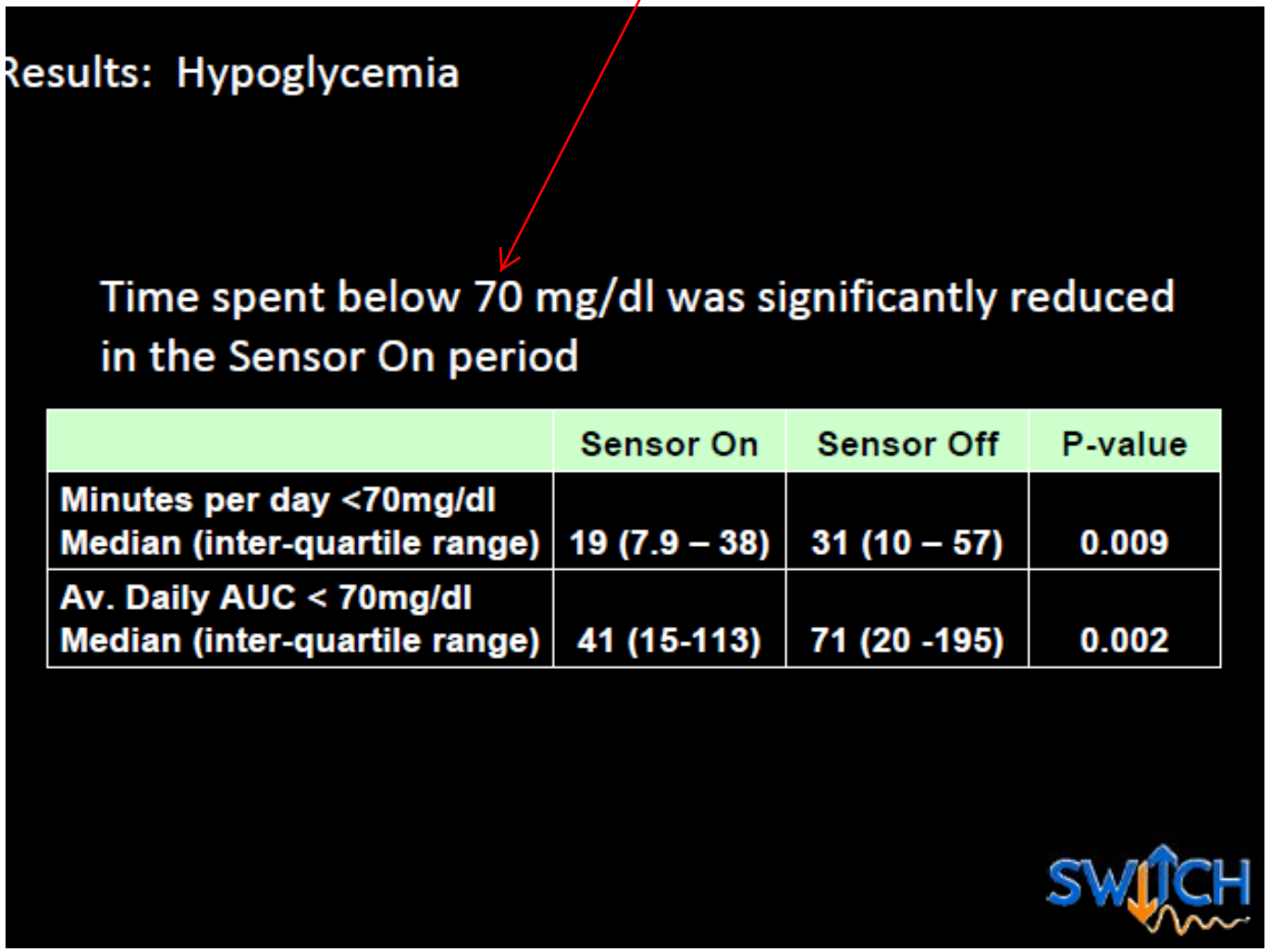
3,8 mmol/l



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Results: Secondary

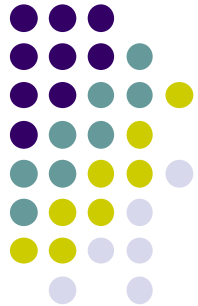
- Significantly fewer fingersticks were performed during the Sensor On period

  5.54 v. 5.02 approx 15 tests/month ($p<0.001$)

- Children using the sensor 70% or more missed significantly less school

  13 days v 42 days (total events/6mo; $p=0.005$)

CGM studies conclusions



- CGM improves metabolic control in children and adolescents
- Even patients with good metabolic control benefit of CGM with lower HbA1c and hypoglycaemia
- Could CGM preserve more beta cells in newly diagnosed children ?