



# T1D Exchange: Insulin Delivery Devices in Management of T1D Among Pediatric Patients

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## Objective

Our study aimed to evaluate the different insulin delivery devices and their impact on A1c outcomes within our patient population.

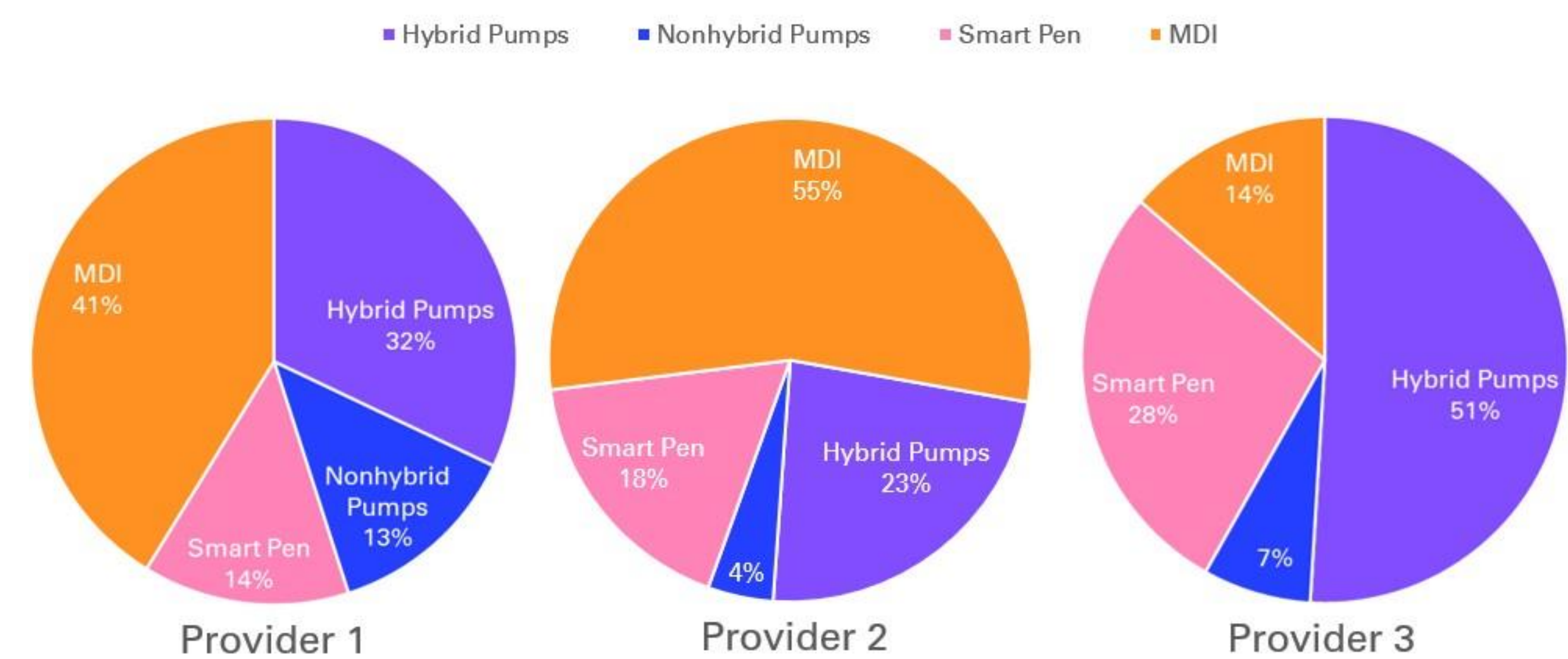
## Methods

- Data was acquired via chart review.
- All clinic patients with T1D seen from January to December 2023.
- A total of 837 patient encounters by 3 physicians.
- We compared A1C and insulin delivery methods:
  - Multiple Daily Injections (MDI)
  - Smart Pen (SP)
  - Non-Hybrid Pumps (NHP)
  - Hybrid Pumps (HP)

## Patient Characteristics

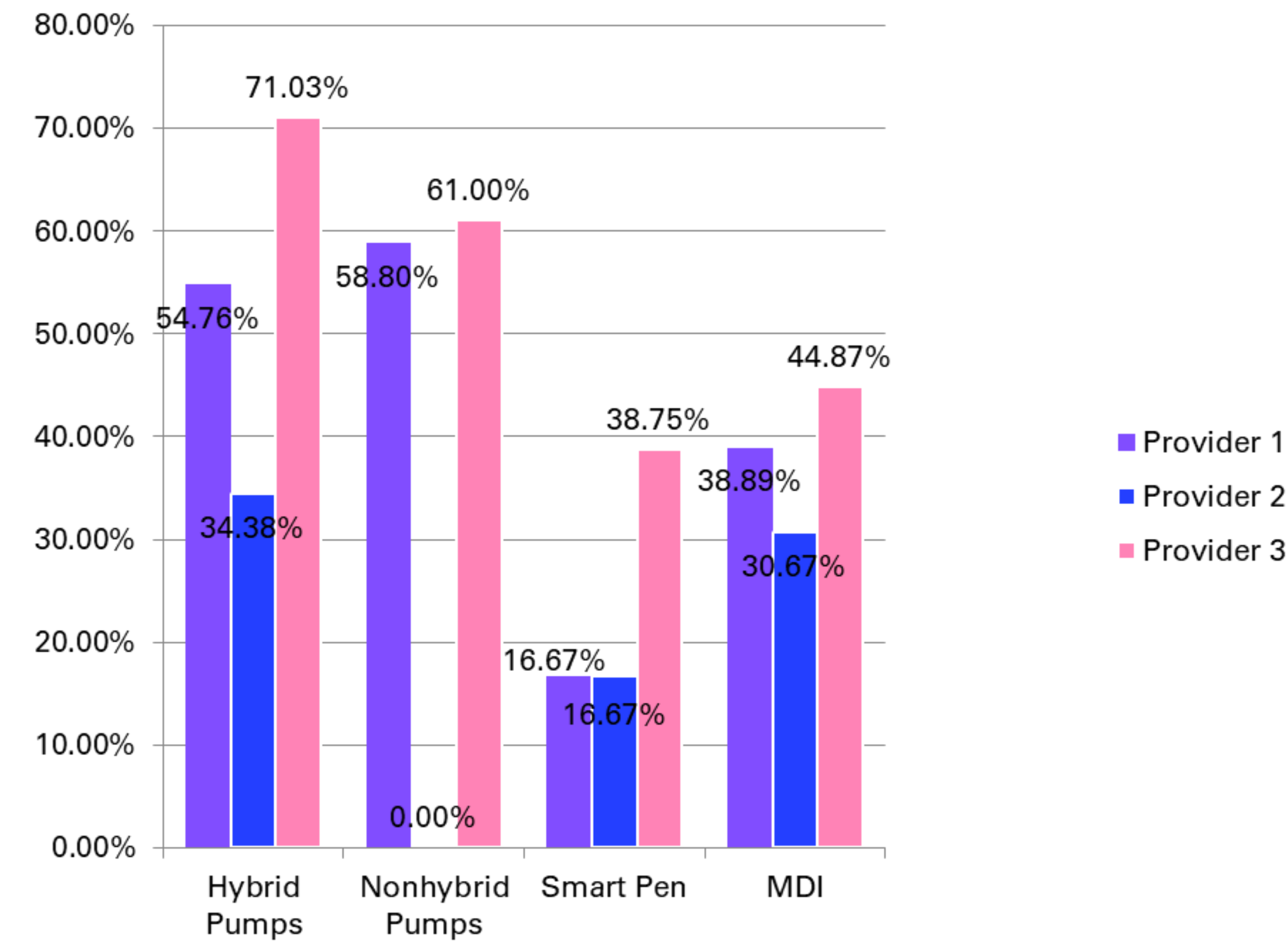
Insulin Delivery Device	Hybrid Pump (n)	NonHybrid Pump (n)	Smart Pen (n)	MDI (n)	Total (n)
Provider 1	42	17	18	54	131
Provider 2	32	6	24	75	137
Provider 3	290	41	160	78	569
<b>Total (n)</b>	<b>364</b>	<b>64</b>	<b>202</b>	<b>207</b>	<b>837</b>

## USE OF INSULIN DELIVERY DEVICES BY PROVIDER

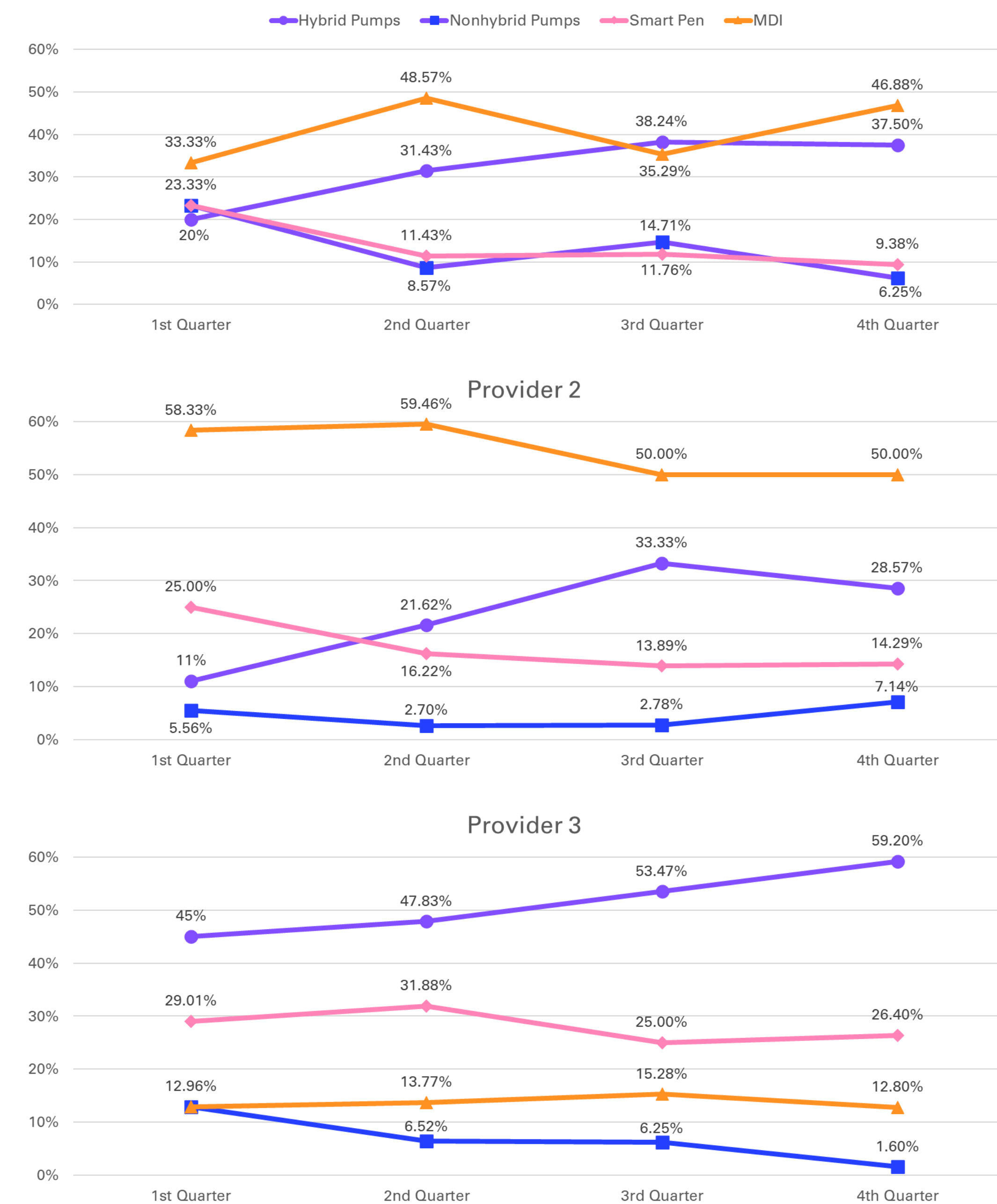


## Results

Percent of Patients with A1C < 7.5% for Insulin Delivery Device Used



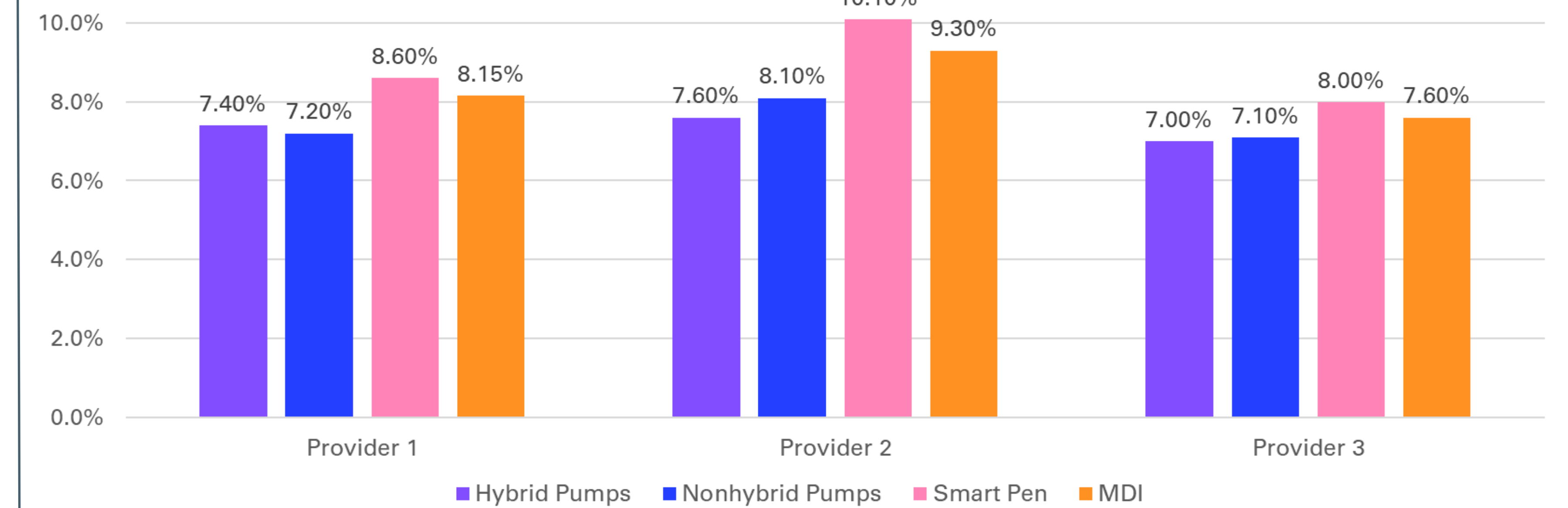
Percent of Patients Using Insulin Delivery Devices



## Results (Continued)

- Overall, 44% of patients used HPs, 8% used NHPs, 24% used SP, and 25% on MDI.
- The highest median A1C was among SP users, followed by MDI users.
- HP users had the lowest median A1C and the highest percentage of A1C < 7.5%.
- Provider 2's patients were mostly publicly insured.
- Provider 3 had the highest number of patients and the highest percentage of HP usage.

Median A1C and Insulin Delivery Devices



## Conclusions/Next Steps

- Results may be affected by patient preference for insulin delivery devices as well as correct use of those devices.
- For future studies we may investigate reasons behind these preferences.
- Each quarter appears to show among all providers that there is a trend of increasing HP use.
- Based on these results our practice has been encouraging hybrid pump use.

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