



## Editorial Commentary

# Type 1 diabetes self-care in schools: A global perspective

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Worldwide, type 1 diabetes (T1D) is a common chronic disease in school-aged children.<sup>[1]</sup> The school environment plays a vital role in the management of T1D, as a significant proportion of waking hours are spent in this setting. Integration of appropriate diabetes care into the school routine can not only optimize glycemic control but also has the potential to limit the psychosocial impacts of diabetes.<sup>[2]</sup> To address this important issue, the International Society for Paediatric and Adolescent Diabetes developed guidelines to support schools and specialist teams to work together to develop a framework of acceptable care.<sup>[2]</sup> While intended to be relevant globally, it is acknowledged that even in high-resource settings, significant challenges are faced in terms of provision of adequate school staff training and capacity within the increasingly complex classroom environment that contemporary teachers face. However, it is recommended that the absolute minimal level of T1D care at school in ALL countries should include adherence to the following principles: (1) To uphold the student's right to safely attend school, (2) to enable the student to experience equal opportunity, obtain equal education, and participate equally in activities with their peers, and (3) to allow the student to monitor blood glucose levels at school and treat blood glucose out of target range in a respectful manner and in an appropriate place chosen in collaboration with the student and parent.

Virmani A and colleagues report on a cross-sectional study of 397 patient-parent T1D mellitus dyads, which assessed both diabetes self-care activities in the school setting and school staff attitudes towards diabetes in three major Indian cities. It is concerning that less than half of children were having a mealtime injection or bolus during school hours despite being prescribed intensive insulin modalities, and blood glucose checks occurred regularly (defined as more than once per week) in only 24% of children. This may be understood within the context of the reported school attitudes towards diabetes where school insistence of secrecy around the diagnosis and testing was reported in 12.6%, permission to test, inject or provide pre-activity snacks was reported in 15.9%, 4.3%, and 7.6%, respectively, and prohibition from participation in sports or excursions was experienced by 17.9% of children.<sup>[3]</sup> Daily parental attendance to provide diabetes-related support was necessary in 17.1%, which was more likely with higher parental education and younger children. Given that participants were attending one of three specialist services, the majority (95.2% of children) were on either MDI or CSII regimens and over two-thirds of the children were attending privately-funded schools, these findings may not be generalizable to T1D experience across India which may in fact be less positive than that reported herein.

Descriptions of school-based supports for children with T1D are largely limited to self-report and do not necessarily reflect universal experience. However, studies such as this highlight the need

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for clinicians to actively seek to understand school routines and issues faced by our patients so that we may work with the family and school staff to address specific issues which may affect safety or emotional wellbeing. In real terms, this means clinicians avoiding a dogmatic “one size fits all” attitude to insulin regimens and being prepared to be flexible and adapt to the constraints imposed by the child’s educational environment or parental abilities. It may be feasible to achieve acceptable clinical outcomes using a variety clinical strategies and these should be explored if particular circumstances mitigate against the use of high frequency or technology-dependent insulin delivery.<sup>[4]</sup> While the experiences described herein are concerning, they are not isolated to India or indeed the developing world. Similar experiences occur on a daily basis across the globe.<sup>[5]</sup> The development of specific school-based guidelines will allow specialist teams to advocate for adequate resource allocation and increasing standards of care within the school day but innovative and cost-effective methods to ensure that this can happen are required.<sup>[2]</sup> Increasing global access to online resources may facilitate directed T1D school education programs, such as the one developed by Diabetes Australia in conjunction with the Australian federal government, offering a sustainable and efficient means to provide standardized education and training at scale.<sup>[6]</sup> The development of a standardized school management plan is recommended and may direct school staff towards best practice management of hypo- and hyperglycemia while also facilitating dialogue between families, specialists, and teachers.<sup>[2]</sup> However, the capacity to provide specific in-person training to allow insulin to be safely injected in the school setting without the need for parental attendance also needs to be prioritized. Many parents do not have the flexibility or capacity within their working day to allow for attendance on a daily basis which precludes their children from optimal effects of the intensive insulin regimens which are now considered standard of care.<sup>[7]</sup>

While school-based diabetes care occurs outside the walls of our hospitals and clinics, it is a priority for children with

T1D and their families nonetheless. Clinicians and educators alike have a responsibility to ensure that every child with T1D is afforded the same opportunities and positive school experiences as their peers. Only education, training, and advocacy can address negative attitudes toward diabetes which originate from a lack of understanding rather than compassion for the most part.

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