

DiSH a la carte

Back to School with Diabetes in the COVID Era

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Conflicts of interest

- None



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Objectives

- Explain the difference in risk that COVID-19 poses for children vs. adults with diabetes.
- Understand our limitations in understanding the risk COVID-19 poses for children.
- Be able to advise your school leadership on policies to optimize health for children with T1D during the pandemic.
- Advocate for the health of our communities.



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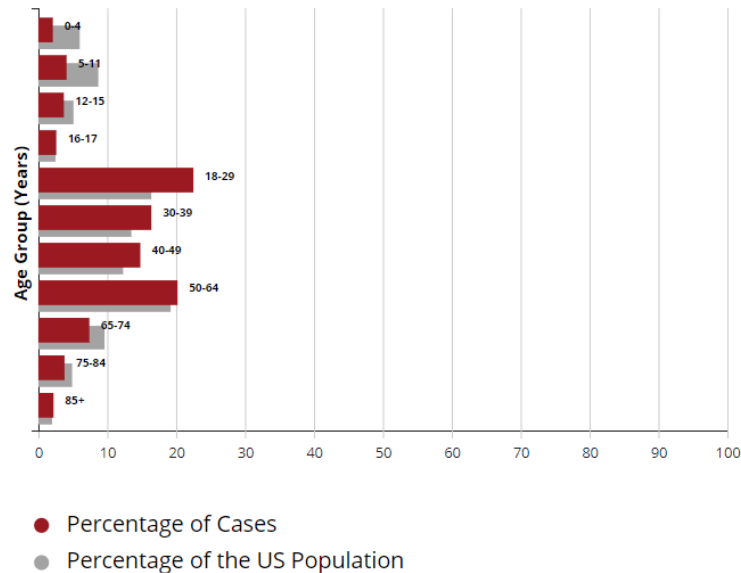
COVID-19 in the US, overview

- 601,124 deaths attributed to COVID-19 (through 7/21/21)
 - 79.3% were 65 years and over
 - 17.9% were 45-64 years
 - 2.8% were under 45 years
 - 16% had diabetes

Cases by Age Group:

Download

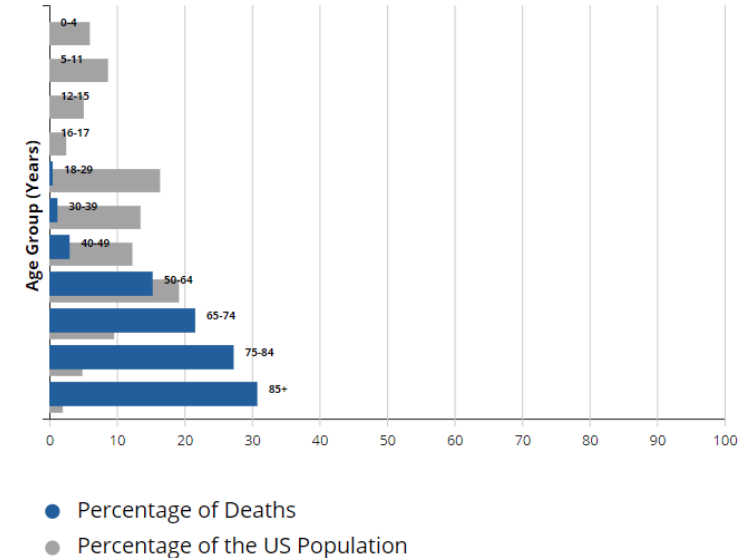
Data from 27,787,790 cases. Age group was available for 27,587,485 (99%) cases.



Deaths by Age Group:

Download

Data from 500,144 deaths. Age group was available for 500,106 (99%) deaths.



<https://www.cdc.gov/nchs/covid19/mortality-overview.htm>

https://covid.cdc.gov/covid-data-tracker/?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fcases-updates%2Fcases-in-us.html#demographics



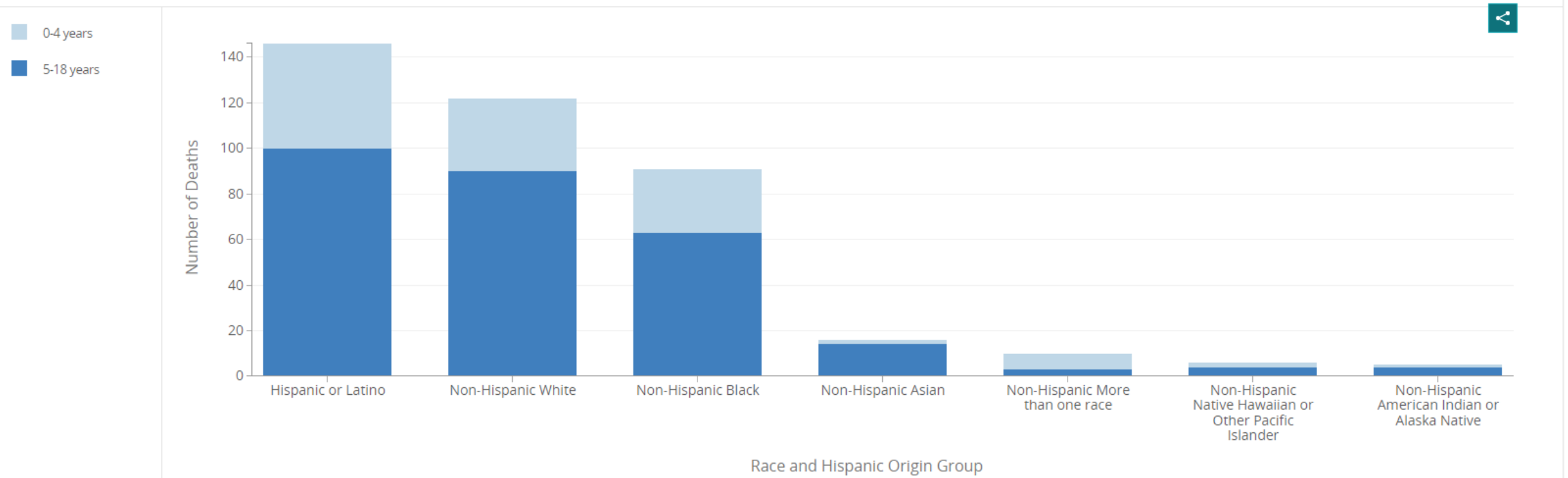
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COVID-19 disproportionately affects black and brown children.

Figure 2. Provisional COVID-19 deaths by age group, by race and Hispanic origin: United States



<https://data.cdc.gov/NCHS/Deaths-by-Race-and-Hispanic-Origin-Ages-0-18-Years/32c3-mvuz>



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Infectious disease in people with diabetes

- **Adults with diabetes** are more likely than those without diabetes to have infections of the urinary tract, skin, lower resp tract, and serious bacterial infections.
- **Children and adolescents** with A1c at/near target range do not appear to have increased risk of infections.
- **Infectious diseases** in people with diabetes may trigger DKA.

- Muller LM a. J, Gorter KJ, Hak E, et al. Increased Risk of Common Infections in Patients with Type 1 and Type 2 Diabetes Mellitus. *Clin Infect Dis*. 2005;41(3):281-288. doi:10.1086/431587
- Shah BR, Hux JE. Quantifying the Risk of Infectious Diseases for People With Diabetes. *Diabetes Care*. 2003;26(2):510-513. doi:10.2337/diacare.26.2.510
- Laffel LM, Limbert C, Phelan H, Virmani A, Wood J, Hofer SE. ISPAD Clinical Practice Consensus Guidelines 2018: Sick day management in children and adolescents with diabetes. *Pediatr Diabetes*. 2018;19:193-204. doi:10.1111/pedi.12741



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Our concerns for people with diabetes during the pandemic

- High A1c and minority race/ethnicity are risk factors for DKA.
- With COVID-19, does diabetes
 - Increase risk of infection?
 - Increase risk for DKA?
 - Increase risk of severe disease?

- Cengiz E, Xing D, Wong JC, et al. Severe hypoglycemia and diabetic ketoacidosis among youth with type 1 diabetes in the T1D Exchange clinic registry. *Pediatric Diabetes*. 2013;14(6):447-454. doi:10.1111/pedi.12030
- Kahkoska AR, Shay CM, Crandell J, et al. Association of Race and Ethnicity With Glycemic Control and Hemoglobin A1c Levels in Youth With Type 1 Diabetes. *JAMA Netw Open*. 2018;1(5). doi:10.1001/jamanetworkopen.2018.1851



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Associations of type 1 and type 2 diabetes with COVID-19-related mortality in England: a whole-population study

Emma Barron, Chirag Bakhai, Partha Kar, Andy Weaver, Dominique Bradley, Hassan Ismail, Peter Knighton, Naomi Holman, Kamlesh Khunti, Naveed Sattar, Nicholas J Wareham, Bob Young, Jonathan Valabhji

Lancet Diabetes Endocrinol 2020; 8: 813-22 www.thelancet.com/diabetes-endocrinology Vol 8 October 2020

- Whole population study (England); Mar 1 – May 11 2020 (72 d)
 - N= 61,414,470
 - N= 2,864,670 with T2D
 - N= 263,830 with T1D
 - 100,760 (38%) under age 40 years
 - N= 41,750 had some other form of diabetes
- 23,698 in-hospital deaths related to COVID-19 (whole population)
 - 31.1% were in people with diabetes



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2020; 8: 813-22

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- 364 deaths in people with type 1 diabetes
- < 5 deaths age < 40 and 40-49 years in people with type 1 diabetes

	COVID-19-related deaths per 100 000 people over 72 days (95% CI)				
	Overall population	Type 1 diabetes	Type 2 diabetes	Other diabetes	No diabetes
Total	39 (38-39)	138 (124-153)	260 (254-265)	165 (129-209)	27 (27-28)
Age, years					
0-39	1 (0-1)	..	27 (16-42)
40-49	5 (4-5)	..	42 (34-51)	..	4 (3-4)
50-59	16 (15-17)	100 (74-132)	77 (69-85)
60-69	45 (43-47)	202 (158-254)	144 (135-153)	82 (33-170)	31 (30-33)
70-79	117 (114-120)	401 (325-489)	273 (262-285)	305 (191-462)	87 (84-89)
≥80	415 (408-422)	1048 (872-1249)	661 (640-682)	632 (432-892)	356 (349-364)
Sex					
Male	48 (47-48)	155 (136-177)	300 (291-308)	203 (149-271)	33 (32-34)
Female	30 (29-30)	115 (96-137)	208 (200-216)	120 (76-180)	22 (21-22)
Unknown	0 (0-466)	0 (0-61481)	0 (0-46111)	0	0 (0-475)
Ethnicity					
Asian	47 (45-49)	314 (228-421)	277 (260-295)
Black	72 (69-76)	432 (304-595)	565 (524-609)	239 (77-557)	36 (33-39)
Mixed	18 (16-21)	..	337 (265-422)	..	10 (8-12)
Other*	30 (28-33)	225 (113-403)	272 (235-312)	0 (0-292)	19 (17-21)
White	47 (47-48)	119 (105-135)	261 (254-268)	187 (140-244)	35 (35-36)
Unknown	7 (7-8)	..	70 (60-81)



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- Adjusted (age, sex, deprivation index, ethnicity, region, cardiovascular comorbidity) odds for death:
 - T1D 2.86 [2.58-3.18]
 - T2D 1.80 [1.75-1.86]
- Model in people < 70 years of age:
 - T1D 6.39 [5.40-7.56]
 - T2D 3.74 [3.50-3.99]
- The effect of diabetes was stronger for BAME (Black, Asian, minority ethnic)

- **T1D increases risk of death in adults >50 years of age**, maybe more than T2D. Duration of diabetes effect?

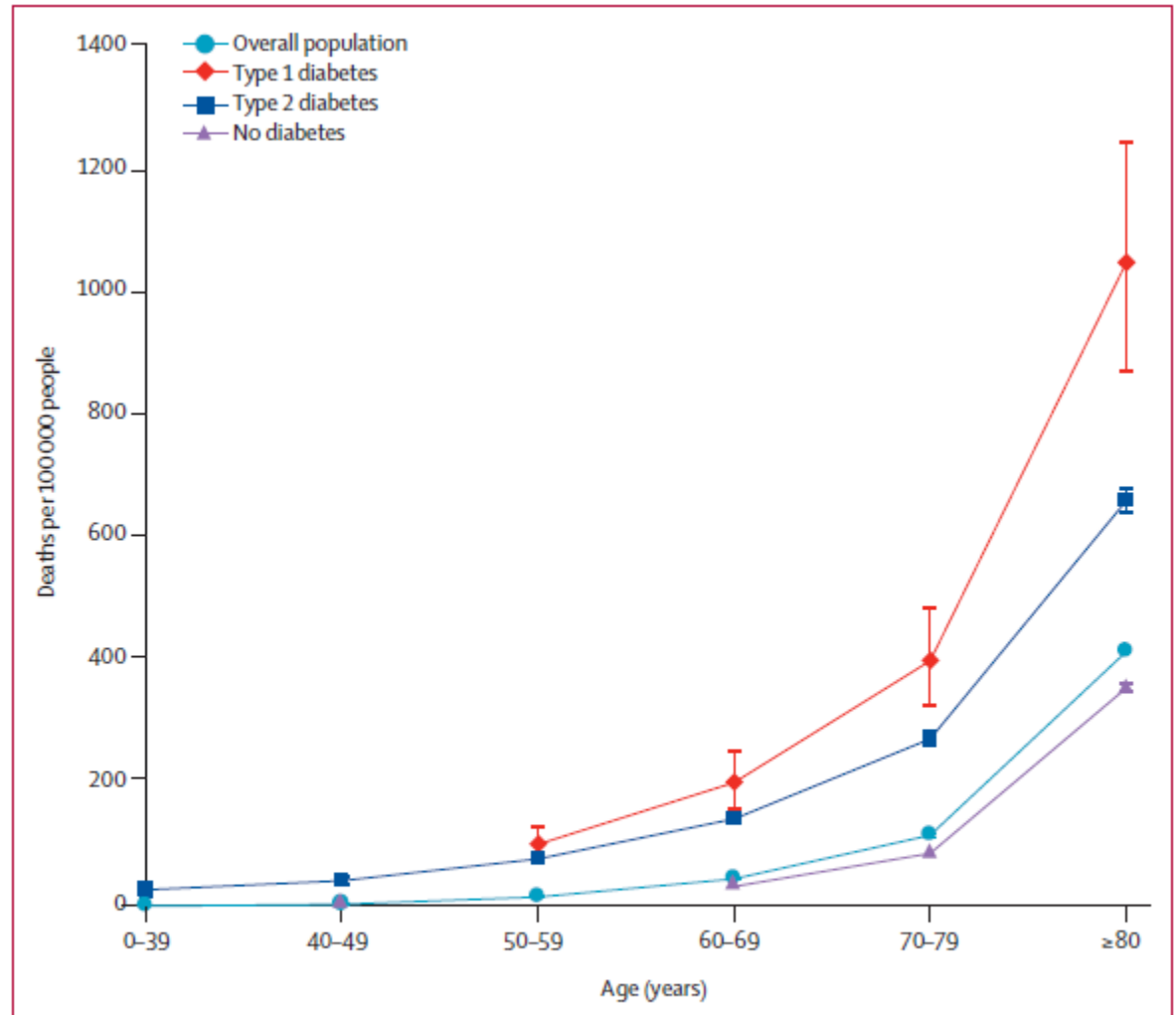


Figure 1: Unadjusted in-hospital COVID-19 mortality rates, March 1 to May 11, 2020, by diabetes status. Error bars show 95% CIs. Data for age groups 0-39 years and 40-49 years for type 1 diabetes and 0-39 years and 50-59 years for no diabetes have been excluded because of small numbers of events (one to four), to comply with data protection regulations.



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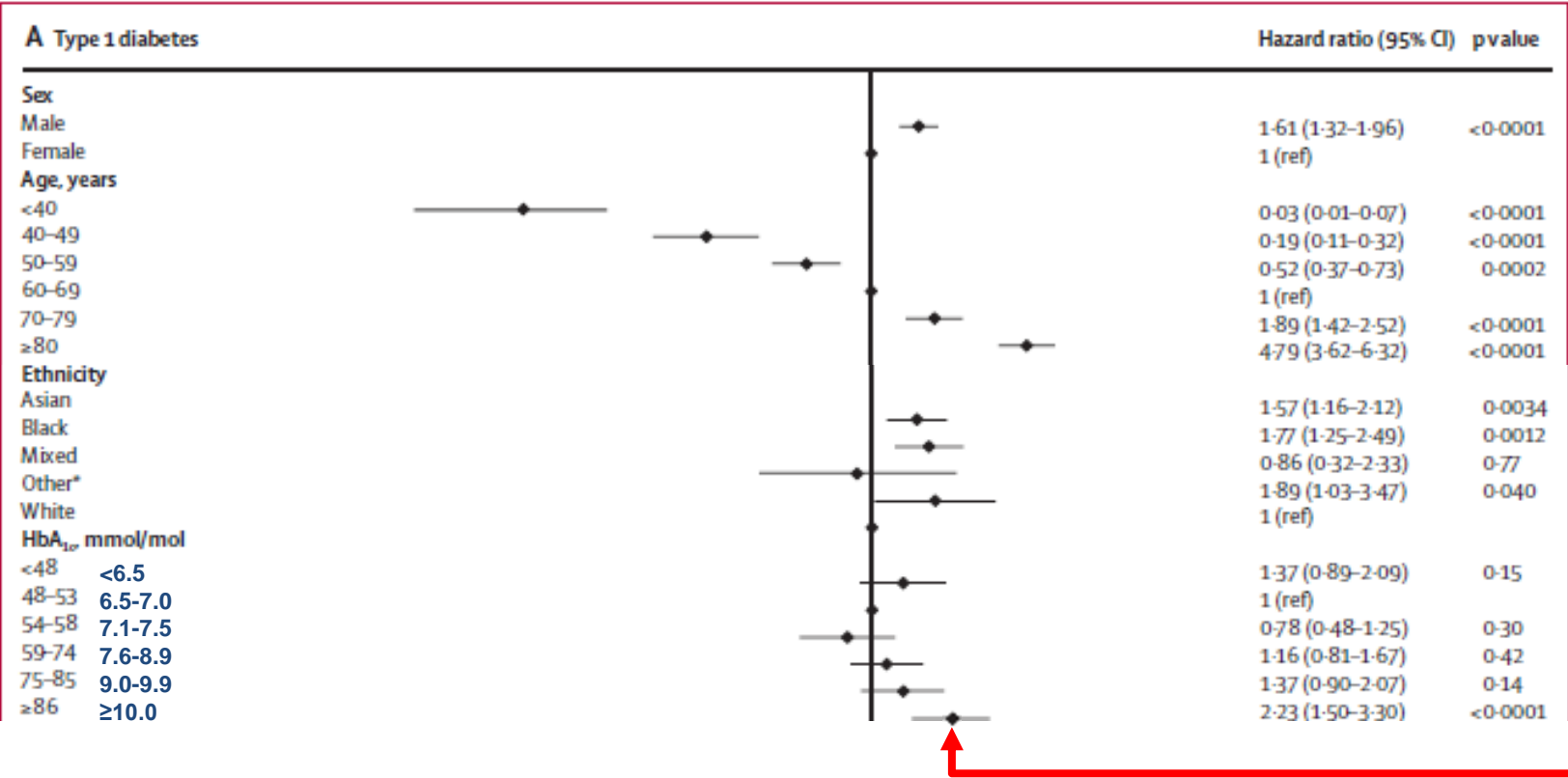


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Risk factors for COVID-19-related mortality in people with type 1 and type 2 diabetes in England: a population-based cohort study

Lancet Diabetes Endocrinol
2020; 8: 823-33

Naomi Holman, Peter Knighton, Partha Kar, Jackie O'Keefe, Matt Curley, Andy Weaver, Emma Barron, Chirag Bakhai, Kamlesh Khunti, Nicholas J Wareham, Naveed Sattar, Bob Young, Jonathan Valabhji



- A1c >10% increases risk of death



COVID-19 Severity Is Tripled in the Diabetes Community: A Prospective Analysis of the Pandemic's Impact in Type 1 and Type 2 Diabetes. Diabetes Care 2021;44:526–532

Diabetes Care 2021;44:e103–e104 | <https://doi.org/10.2337/dci21-0005>

Justin M. Gregory,¹
James C. Slaughter,² Sara H. Duffus,¹
T. Jordan Smith,¹
Lauren M. LeSturgeon,³
Sarah S. Jaser,¹ Allison B. McCoy,⁴
James M. Luther,⁵ Erin R. Giovannetti,⁶
Schafer Boeder,⁶ Jeremy H. Pettus,⁶
and Daniel J. Moore¹

- Prospective cohort study of COVID-19 cases across 137 clinical locations
 - 21,929 people without diabetes
 - T2D n=1,316
 - T1D n=160
- T1D:
 - aOR 3.9 (1.75-8.69) for hospitalization
 - aOR 3.35 (1.53-7.33) for greater illness severity
 - Similar to risk in T2D
 - **Only 22/160 with T1D were age <18 years**
 - 10 hospitalized, no mechanical ventilation (9 DKA)
 - No deaths
- **Mortality without diabetes was 0.5%**
- **Mortality in the T2D group was 4.8%**



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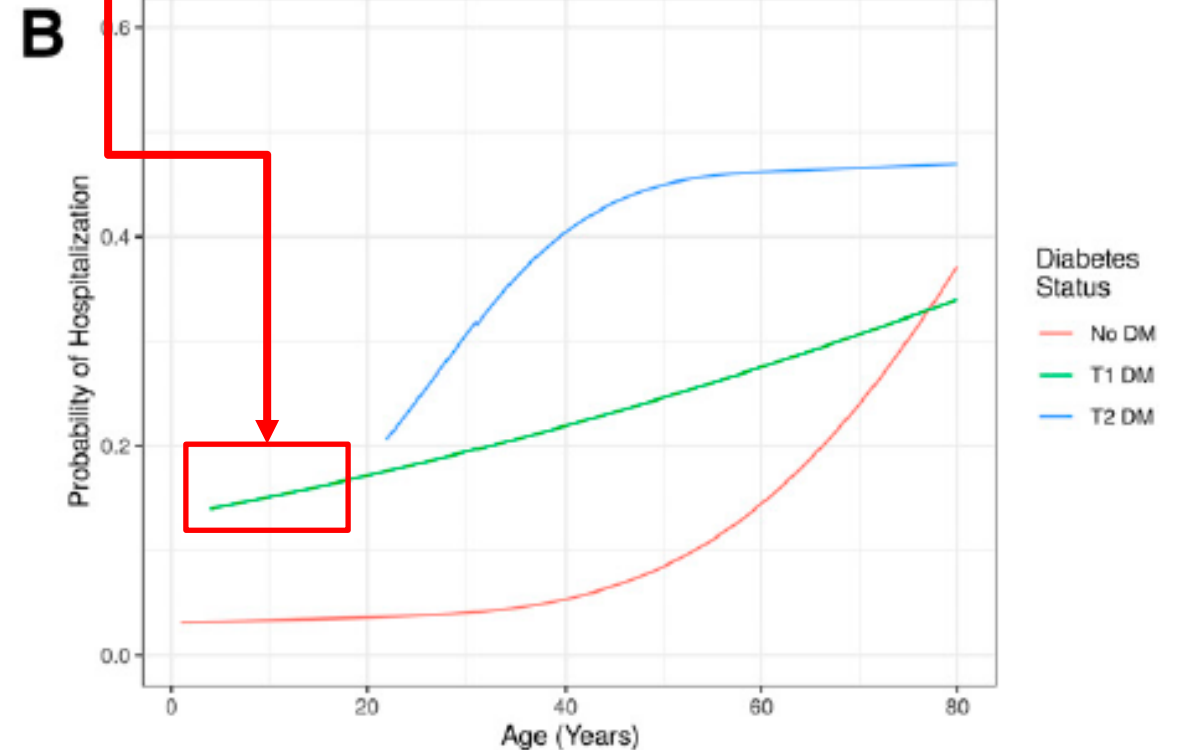
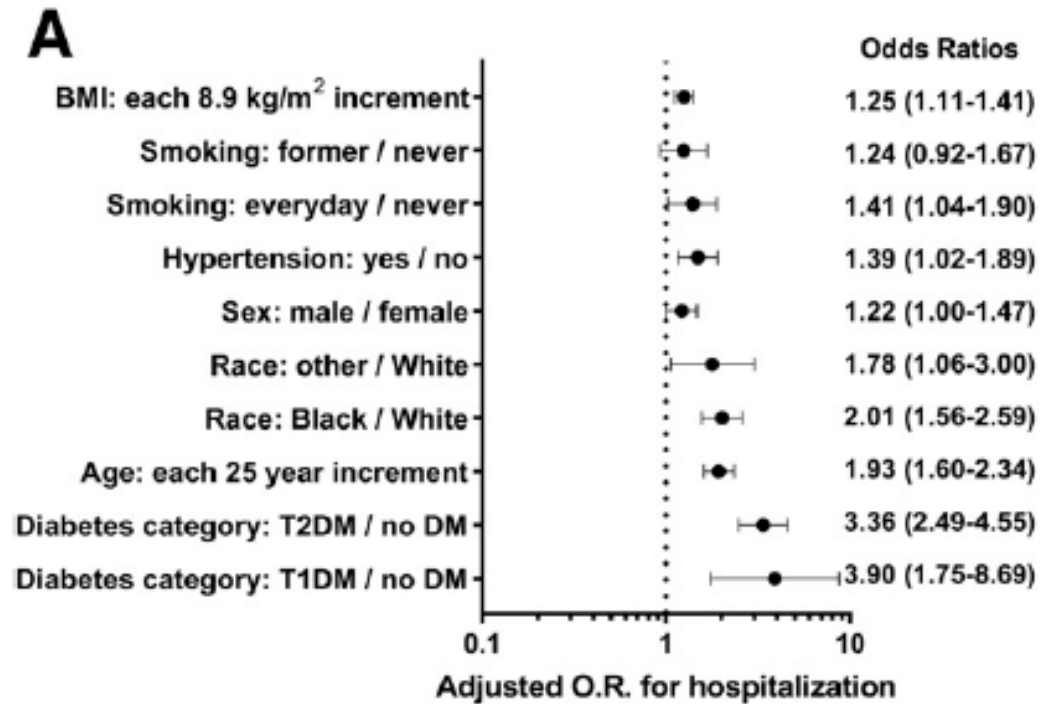
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Excess Severity of COVID-19 in Type 1 Diabetes

Diabetes Care

Risk for Hospitalization



Issues:

- Extrapolating adult data to pediatrics
- No comparison to baseline hospitalization risk



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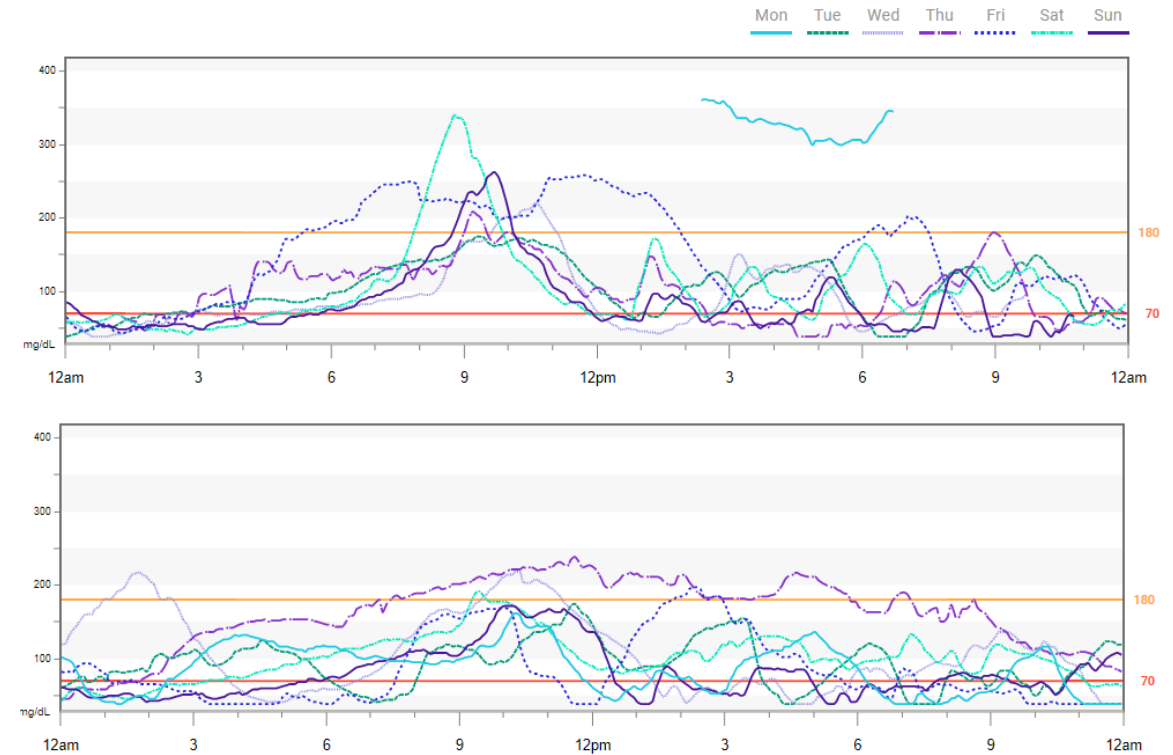
Additional pediatric data from BDC through Dec 2020 (unpublished)

- Confirmed test (n=49)
 - Self-report only (n=39)
 - DKA (n=10)
 - 6/10 with last A1c >14%
 - 9/10 with last A1c >10%
 - 3/10 on CGM
 - 2/10 on pump
 - 6 Hispanic, 2 Non-Hispanic White, 1 Black, 1 More than 1 race
 - Severe hypoglycemia (n=1)
- We are missing COVID-19 testing data despite having a statewide health information exchange.***
- On chart review, COVID-19 was largely incidental to the DKA cases.***



BDC patient with severe hypoglycemia and COVID-19

- 12-year-old boy admitted with severe hypoglycemia and found to have COVID-19 at that time
- Last A1c 10.4%
- No other symptoms of COVID-19
- Clearly at high baseline risk for severe hypo



T1D Exchange COVID-19 Surveillance registry

- 52 US diabetes centers
- Patients with T1D who got COVID-19
- Many mild cases likely not reported
- No comparison to people without T1D or people without COVID-19
- Manuscripts:
 - Early report (n= 64; June 2020; *Diabetes Care*. PMID 32303837)
 - Inequities (n=180; *J Clin Endocrin Metab*. PMID 33410917)
 - Adults (n=113; *J Clin Endocrin Metab*. PMID 33165563)
 - New onset T1D (n=148; *J Diabetes*. PMID 33283979)
 - Children (n=266; *J Diabetes*. PMID 33855813)



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Adults vs children with T1D and COVID-19 in the T1D Exchange COVID-19 Surveillance Registry

Adults (n=113)

Adverse Acute T1D outcome	N
Death	5
DKA	27 (61%)
Severe hypoglycemia	6
Tracheal intubation	6
None	68

Table 2. Odds ratio for hospitalization in confirmed COVID-19 patients (N = 113).

	Unadjusted	Fully adjusted
HbA1c	1.42 (1.18, 1.76) ^a	1.43 (1.16, 1.82) ^a
Age	—	1.05 (1.02, 1.08) ^a
Gender	—	1.05 (0.90, 1.98)
Race	—	3.63 (1.42, 9.70) ^a
Cardiovascular disease	—	3.36 (1.16, 10.28) ^a
Chronic kidney disease	—	2.75 (0.91, 8.74)

Children (n=266)

Adverse Acute T1D Outcome	Hospitalized N (%)	Not hospitalized N (%)	P value
Death	0 (0)	0 (0)	<.001
DKA	44 (72)	0 (0)	
Severe Hypoglycemia	4 (7)	0 (0)	
Respiratory support †	3 (5)	0 (0)	
None ‡	10 (16)	205 (100)	

Table 2: Logistic regression for hospitalization among patients with confirmed COVID-19 and previously established type 1 diabetes.

n = 266	Unadjusted	Adjusted
A1c	1.60 (1.39, 1.85) *	1.56 (1.34, 1.84) *
Age	-	0.98 (0.89, 1.08)
Female gender	-	0.88, (0.44, 1.74)
Public insurance	-	1.11 (0.48, 2.54)
Minority Race/ethnicity	-	1.34 (0.61, 2.95)



Clinical Research Article

Inequities in Diabetic Ketoacidosis Among Patients With Type 1 Diabetes and COVID-19: Data From 52 US Clinical Centers

Osagie Ebekeozien,^{1,*} Shivani Agarwal,^{2,*} Nudrat Noor,¹ Anastasia Albanese-O'Neill,³ Jenise C. Wong,⁴ Tossaporn Seeherunvong,⁵ Janine Sanchez,⁵ Daniel DeSalvo,⁶ Sarah K. Lyons,⁶ Shideh Majidi,⁷ Jamie R. Wood,⁸ Runa Acharya,⁹ Grazia Aleppo,¹⁰ Kathryn M. Sumpter,¹¹ Anna Cymbaluk,⁶ Nirali A. Shah,¹² Michelle Van Name,¹³ Lisa Cruz-Aviles,¹³ Guy Todd Alonso,⁷ Mary Pat Gallagher,¹⁴ Srinath Sanda,⁴ Alexis Jamie Feuer,¹⁵ Kristina Cossen,¹⁶ Nicole Riales,¹ Nana-Hawa Yayah Jones,¹⁷ Manmohan K. Kamboj,¹⁸ and Irl B Hirsch¹⁹

Table 3. Odds Ratios for DKA Comparing Racial-Ethnic Minority With NH White Patients With T1D and COVID-19 (N = 163; DKA = 55, no adverse Events = 108)

	Unadjusted OR (95% CI)	Adjusted model ^a OR (95% CI)	Adjusted model ^b OR (95% CI)
Race			
Hispanic vs NH White	3.7 (1.4-9.6) ^d	1.9 (0.7-5.7)	1.6 (0.5-4.9)
NH Black vs NH White	8.8 (3.8-22.0) ^d	3.7 (1.4-10.6) ^d	3.3 (1.2-9.6) ^d
Age (years)	-	1.0 (0.9-1.0)	1.0 (0.9-1.0)
Sex (M vs F)	-	0.8 (0.3-1.7)	0.8 (0.4-2.0)
HbA1c (%)	-	1.3 (1.1-1.5) ^d	1.2 (1.1-1.5) ^d
Insurance	-	2.7 (1.1-6.7) ^c	2.7 (1.1-7.0) ^c
Public vs private			
Newly diagnosed (yes vs no)		-	5.9 (1.5-30.1) ^c

^aAdjusted for age, HbA1c (as continuous variables), sex, insurance

^bAdjusted for age, HbA1c (as continuous variables), sex, insurance, and newly diagnosed T1D status

^c<0.05, ^d<0.001

- Black patients had increased risk for DKA with COVID-19



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Original Investigation | Pediatrics

Underlying Medical Conditions Associated With Severe COVID-19 Illness Among Children

June 7, 2021

Lyudmyla Kompaniyets, PhD; Nickolas T. Agathis, MD; Jennifer M. Nelson, MD; Leigh Ellyn Preston, DrPH; Jean Y. Ko, PhD; Brook Belay, MD; Audrey F. Pennington, PhD; Melissa L. Danielson, MSPH; Carla L. DeSisto, PhD; Jennifer R. Chevinsky, MD; Lyna Z. Schieber, DPhil, MD; Hussain Yusuf, MD; James Baggs, PhD; William R. Mac Kenzie, MD; Karen K. Wong, MD; Tegan K. Boehmer, PhD; Adi V. Gundlapalli, MD, PhD; Alyson B. Goodman, MD

- Claims data for 3,782,157 children with ED or inpatient encounters
- 43,465 had COVID-19
- 4,302 were hospitalized
- 1,273 had ICU admission
- 38 deaths



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Original Investigation | Pediatrics

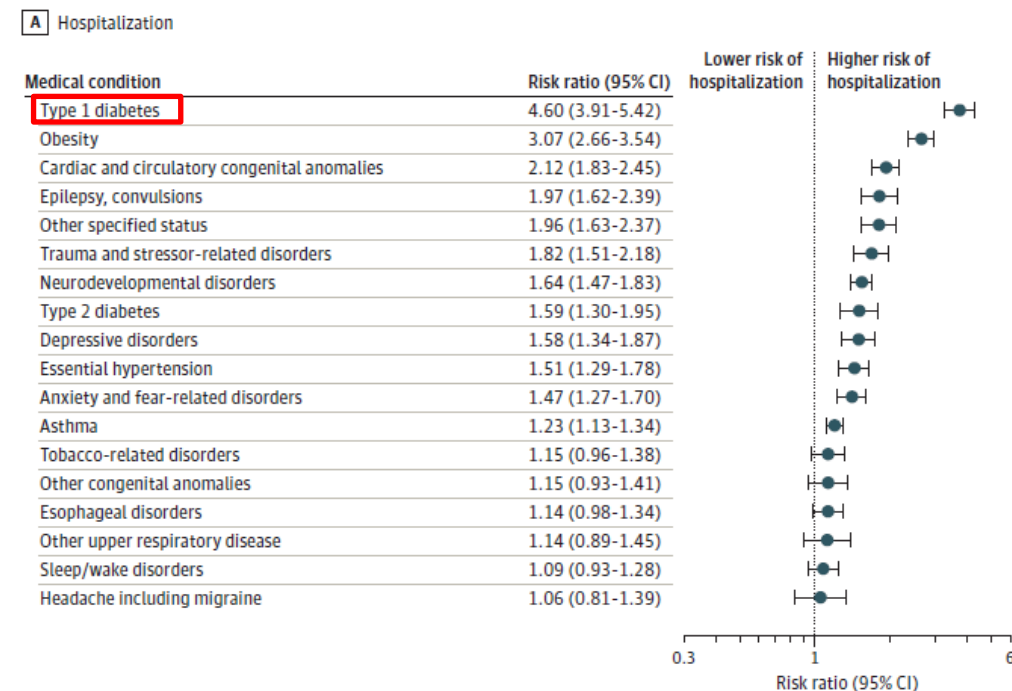
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- How do you differentiate between **WITH COVID-19** and **DUE TO COVID-19**?

Figure 1. Association Between Underlying Medical Conditions and Risk of Hospitalization or Severe Illness When Hospitalized in the Sample



New onset type 1 diabetes and COVID-19



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Newly diagnosed diabetes and COVID-19

- Could SARS-CoV-2 increase the incidence of type 1 diabetes?
 - Virus binds to ACE2, enters endocrine cells
 - SARS epidemic: high incidence of hyperglycemia
 - Viral infections trigger autoimmune diseases
- Could there be increased severity at presentation?

<https://www.endocrineweb.com/news/diabetes/-covid-19-may-trigger-new-onset-diabetes>



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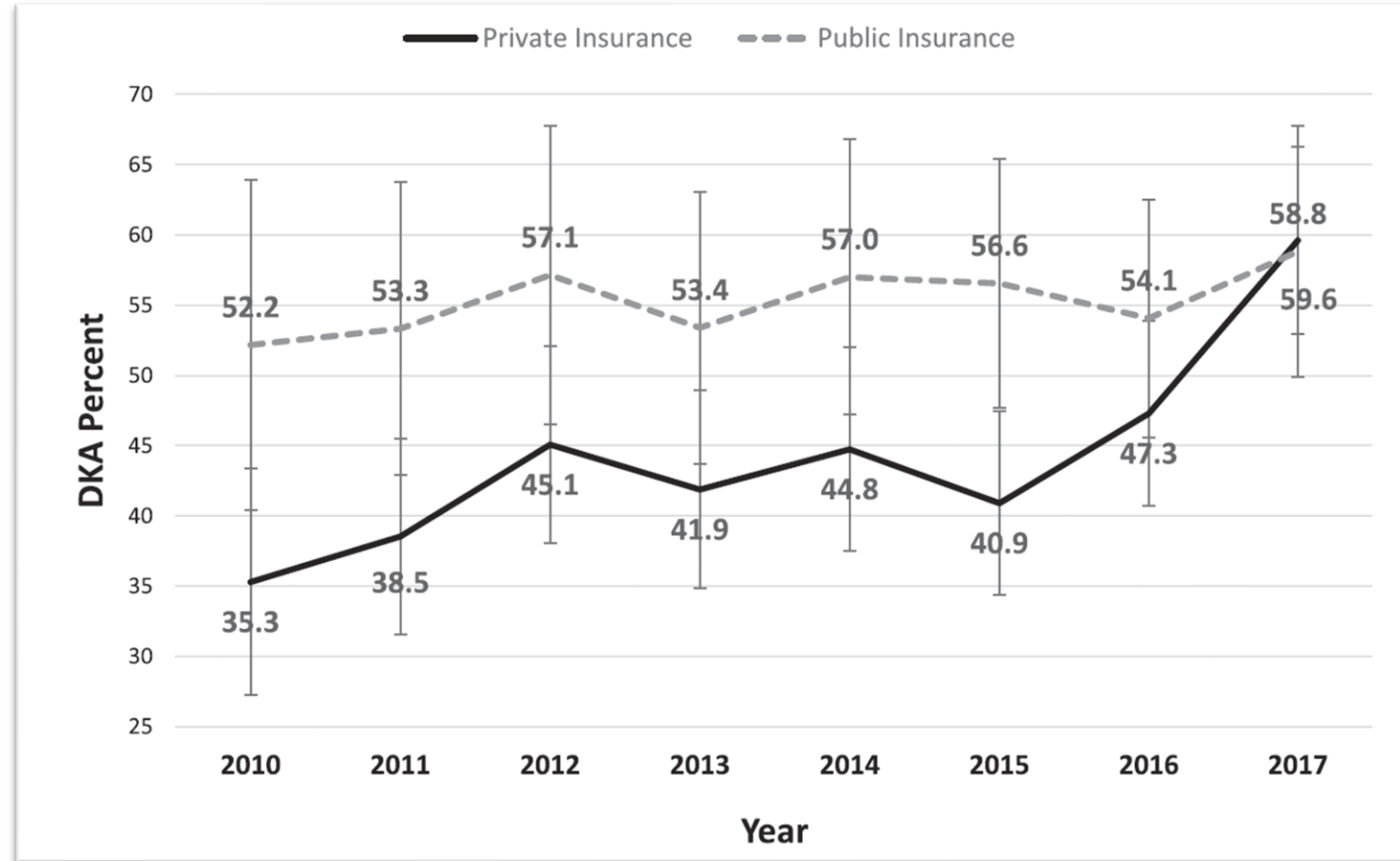
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Diabetic Ketoacidosis at Diagnosis of Type 1 Diabetes in Colorado Children, 2010–2017

G. Todd Alonso,¹ Alex Coakley,¹
 Laura Pyle,^{1,2} Katherine Manseau,³
 Sarah Thomas,¹ and Arleta Rewers⁴

Diabetes Care 2020;43:117–121 | <https://doi.org/10.2337/dc19-0428>

- DKA in patients newly diagnosed with T1D is high in Colorado, maybe similar across the US.



Alonso GT, Coakley A, Pyle L, Manseau K, Thomas S, Rewers A. Diabetic Ketoacidosis at Diagnosis of Type 1 Diabetes in Colorado Children, 2010–2017. *Diabetes Care*. 2020;43(1):117–121.



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Table 1—Diabetes onset, DKA at onset, and acute complications in the pediatric population (0–15 years) observed during COVID-19 pandemic (20 February–14 April 2020) compared with the same period in 2019

	2020		2019		Δ	<i>P</i>
	<i>n</i>	%	<i>n</i>	%		
Patients with diabetes onset	160	—	208	—	–48	—
Patients with DKA (pH <7.3)	61	38.1	86	41.3	–3.2	0.08
Patients with severe DKA (pH <7.1)	27	16.9	31	14.9	2.0%	0.09
Proportion of DKA patients with severe DKA	27	44.3	31	36.0	8.3%	0.03
DKA episodes in patients with established diabetes	13	—	22	—	–9	—
Severe hypoglycemia episodes in patients with established diabetes	10	—	13	—	–3	—

Severe hypoglycemia was defined as an episode with loss of consciousness or requiring hospitalization. The value in boldface type represents significant difference between groups.

Rabbone I, Schiaffini R, Cherubini V, Maffei C, Scaramuzza A, The DSG of ISPED. Has COVID-19 Delayed the Diagnosis and Worsened the Presentation of Type 1 Diabetes in Children? *Diabetes Care*. Published online August 10, 2020.



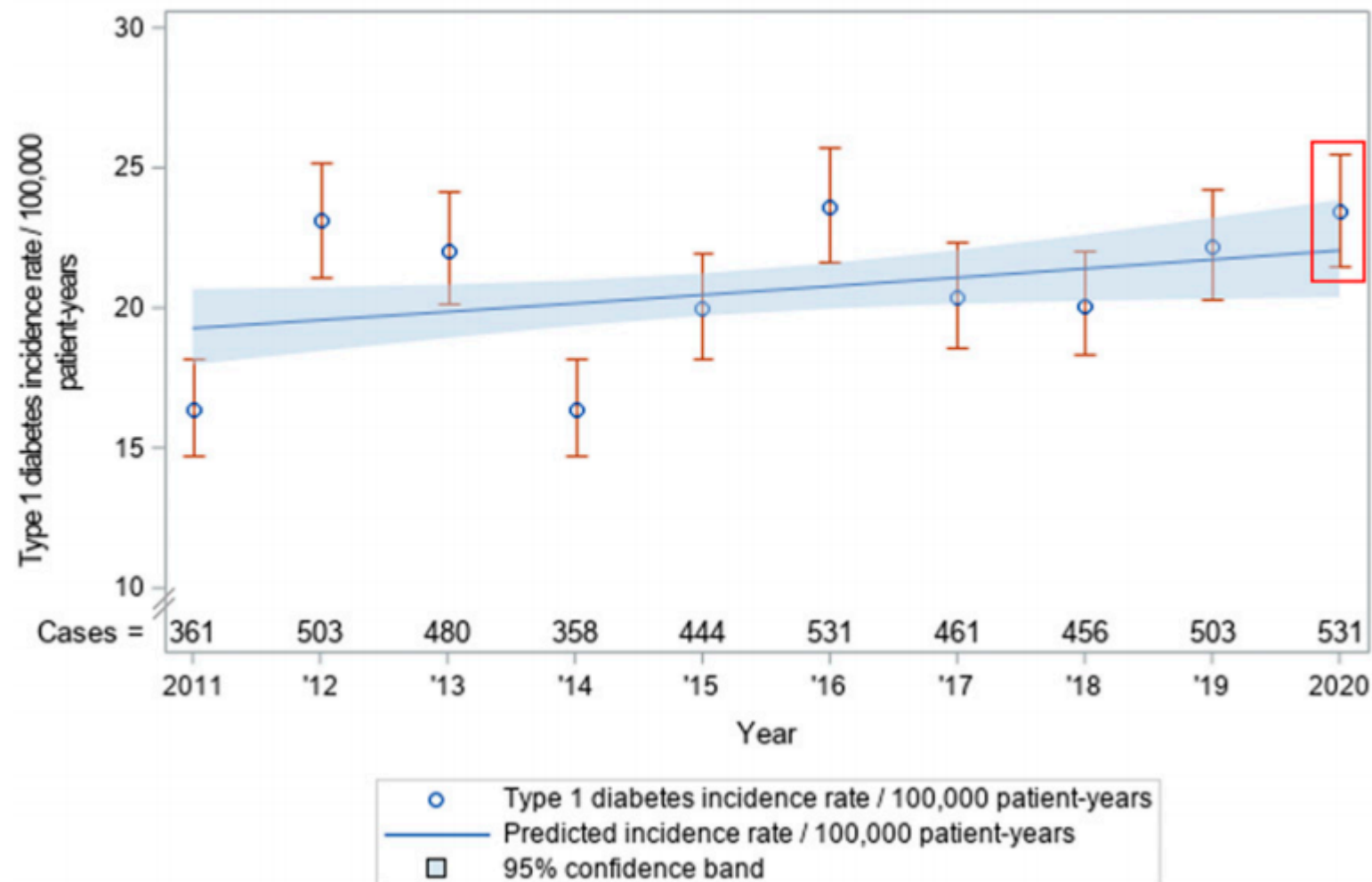
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Incidence rate of type 1 diabetes in children and adolescents <18 years in Germany



Tittel SR, Rosenbauer J, Kamrath C, et al. Did the COVID-19 Lockdown Affect the Incidence of Pediatric Type 1 Diabetes in Germany? *Diabetes Care*.



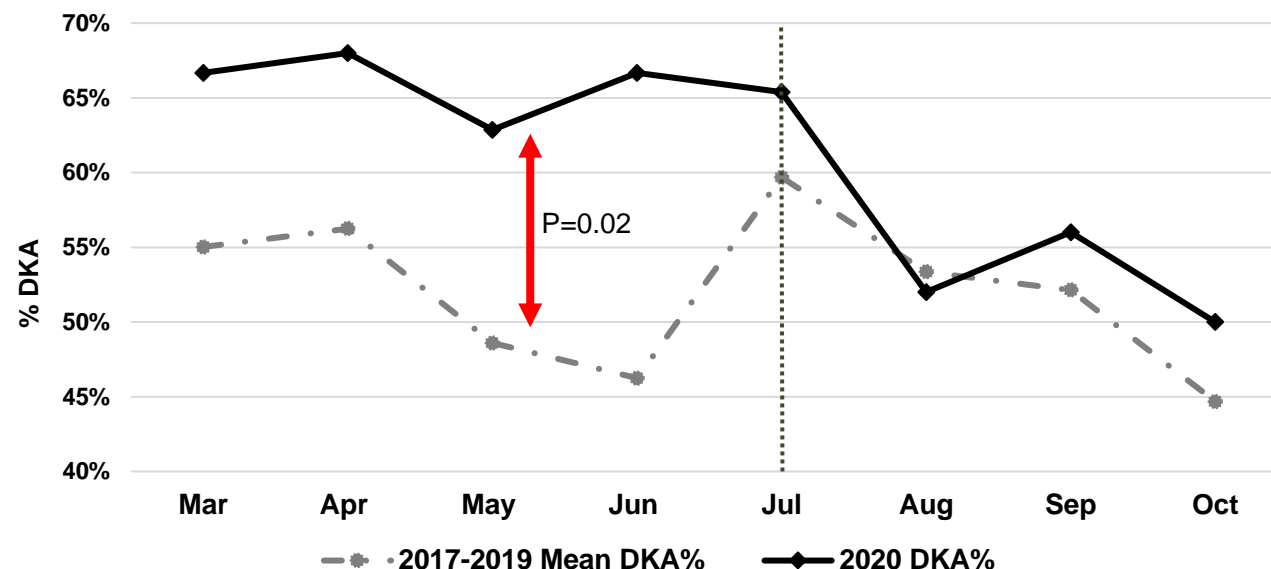
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The prevalence of DKA upon new diagnosis of type 1 diabetes in 2017-2019 vs. 2020.



The vertical line represents the division between the first and second half of the observation period.

Percent of patients with DKA by period of presentation with new onset diabetes

2017-2019		2020		P
Mar-Jun (n=286)	Jul-Oct (n=275)	Mar-Jun (n=99)	Jul-Oct (n=84)	
51.4		65.7		0.02
	52.7		57.1	0.56

Alonso GT, Murphy C, Pyle L, Thomas S, Ohman-Hanson R, Rewers A. Increased prevalence of diabetic ketoacidosis among Colorado children at diagnosis of type 1 diabetes during the COVID-19 pandemic lockdown resolves after reopening. *Diabetes Technol & Ther.* Accepted.



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Newly diagnosed T1D and COVID-19

- Could SARS-CoV-2 increase the incidence of type 1 diabetes?
 - No data support that yet.
 - Could the massive declines in other childhood illnesses offset any difference, or even reduce the incidence of newly diagnosed T1D?
- Could there be increased severity at presentation?
 - Yes, at least during the lockdown period.



COVID-19 vaccination



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COVID-19 vaccination and autoimmunity

- The risk of autoimmunity triggered by COVID-19 vaccines (or any other vaccine, for that matter) is very, very close to zero.
 - J&J and Guillain Barre
 - As of 7/13/21 – 12.5 million doses, 100 cases of GBS, 1 death
 - 0.0008% risk
 - GBS typically develops after an infection (3,000-6,000 cases/year in the US)
 - J&J and thrombosis with thrombocytopenia syndrome
 - 7 per 1 million women between 18-49 years of age.

<https://health.clevelandclinic.org/guillain-barre-syndrome-and-covid-vaccine/>

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/safety-of-vaccines.html#:~:text=After%20receiving%20the%20J%26J%2F,this%20rare%20adverse%20event.>



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COVID-19 vaccination and myocarditis

- The mRNA vaccines (Pfizer and Moderna) have been associated with rare cases of myocarditis.
 - “Per million second doses of mRNA COVID-19 vaccine administered to *males aged 12–29 years*, 11,000 COVID-19 cases, 560 hospitalizations, 138 ICU admissions, and six deaths due to COVID-19 could be prevented, compared with *39–47 expected myocarditis cases* after COVID-19 vaccination.... Among males aged ≥ 30 years, 15,300 COVID-19 cases, 4,598 hospitalizations, 1,242 ICU admissions, and 700 deaths could be prevented, compared with three to four expected myocarditis cases after COVID-19 vaccination. This analysis did not include the potential benefit of preventing post-COVID-19 conditions, such as prolonged symptoms and MIS-C (6,7).
- Advice to my patients: When it's your turn, get in line.

<https://www.cdc.gov/mmwr/volumes/70/wr/mm7027e2.htm>




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How should we protect children from COVID-19 this year?

- American Academy of Pediatrics
 - In-person learning
 - Masks for everyone 2 years and older while indoors
 - Vaccinate everyone who is eligible

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 **News From the Centers for Disease Control and Prevention**

FREE

 July 13, 2021

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Fewer COVID-19 Cases in Schools With Masks and Improved Ventilation

Bridget M. Kuehn, MSJ

JAMA. 2021;326(2):125. doi:10.1001/jama.2021.10044

- 169 elementary schools in GA: masking requirements associated with 37% fewer COVID-19 cases

AAP News

AAP urges in-person learning, masking in updated guidance on safe schools

Trisha Koriath, Staff Writer
July 18, 2021



- <https://www.aappublications.org/news/2021/07/18/schools-071821>
- https://jamanetwork.com/journals/jama/fullarticle/2781847?guestAccessKey=be27dde2-d063-40a2-bd14-4436bf1eb7bb&utm_source=TrendMD&utm_medium=cpc&utm_campaign=Journal_of_American_Medical_Association_TrendMD_1&utm_content=etoc&utm_term=071321



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How should we protect children from COVID-19 this year?

- Many organizations support COVID-19 vaccination for healthcare workers
- Some current mandates:
 - CA (state and healthcare workers)
 - NYC (city workers)
 - The VA, Houston Methodist, Mayo Clinics
- More will follow

Joint Statement in Support of COVID-19 Vaccine Mandates for All Workers in Health and Long-Term Care

Due to the recent COVID-19 surge and the availability of safe and effective vaccines, our health care organizations and societies advocate that all health care and long-term care employers require their workers to receive the COVID-19 vaccine. This is the logical fulfillment of the ethical commitment of all health care workers to put patients as well as residents of long-term care facilities first and take all steps necessary to ensure their health and well-being.

Because of highly contagious variants, including the Delta variant, and significant numbers of unvaccinated people, COVID-19 cases, hospitalizations and deaths are once again rising throughout the United States.¹ Vaccination is the primary way to put the pandemic behind us and avoid the return of stringent public health measures.

Unfortunately, many health care and long-term care personnel remain unvaccinated. As we move towards full FDA approval of the currently available vaccines, all health care workers should get vaccinated for their own health, and to protect their colleagues, families, residents of long-term care facilities and patients. This is especially necessary to protect those who are vulnerable, including unvaccinated children and the immunocompromised. Indeed, this is why many health care and long-term care organizations already require vaccinations for influenza, hepatitis B, and pertussis.

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SIGNATORIES

(Listed Alphabetically)

Academy of Managed Care Pharmacy (AMCP)
American Academy of Ambulatory Care Nursing (AAACN)
American Academy of Child and Adolescent Psychiatry (AACAP)
American Academy of Family Physicians (AAFP)
American Academy of Nursing (AAN)
American Academy of Ophthalmology (AAO)
American Academy of PAs (AAPA)
American Academy of Pediatrics (AAP)
American Academy of Allergy, Asthma & Immunology (AAAAI)
American Association of Clinical Endocrinology (AACE)
American Association of Colleges of Pharmacy (AACCP)
American Association of Neuroscience Nurses (AANN)
American College of Clinical Pharmacy (ACCP)
American College of Physicians (ACP)
American College of Preventive Medicine (ACPM)
American College of Surgeons (ACS)
American Epilepsy Society (AES)
American Medical Association (AMA)
American Nurses Association (ANA)
American Pharmacists Association (APhA)
American Psychiatric Association (APA)
American Public Health Association (APHA)
American Society for Clinical Pathology (ASCP)
American Society for Radiation Oncology (ASTRO)
American Society of Health-System Pharmacists (ASHP)
American Society of Hematology (ASH)
American Society of Nephrology (ASN)
American Thoracic Society (ATS)
Association for Clinical Oncology (ASCO)
Association for Professionals in Infection Control and Epidemiology (APIC)
Association of Academic Health Centers (AAHC)

https://www.acponline.org/acp_policy/statements/joint_statement_covid_vaccine_mandate_2021.pdf
<https://www.washingtonpost.com/health/2021/07/26/mandatory-vaccinations-urged-health-workers/>



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Summary

- The known risks for COVID-19 in adults vs. children with diabetes
 - Adults:
 - Adults over age 50 with diabetes appear to be at much higher risk than the general population for severe illness and death.
 - Children:
 - Children with T1D and high A1c are at risk for DKA with COVID-19
 - No clarity about risk for MIS-C in diabetes vs general pediatric population
 - No clear increase in risk for severe illness or death in children with diabetes
 - Increased risk of DKA at T1D presentation during the lockdown.



Summary (Continued)

- Factors that appear to increase the risk for children with diabetes when they experience COVID-19
 - Black race
 - High A1c → DKA
 - Beware of hypercoagulability risk in COVID-19



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Summary (Continued)

- Reducing risk for severe COVID-19 illness among people with diabetes
 - Avoid COVID-19!
 - Masking, social distancing
 - Vaccination (everyone 12 and up)
 - Well managed blood sugars (CGM)
 - Regular access to diabetes care
 - Do not run out of insulin
 - Continuity with your team



Synthesis and additional discussion questions

- Should my T1D attend school in person this fall?
- Are kids with T2D at increased risk from COVID-19 compared to those with T1D?
- Does diabetes increase the risk of getting COVID-19?
- Does the delta variant change anything?
- When will kids <12 years of age be eligible for vaccination? Will those with diabetes be prioritized?
- Will kids with diabetes be more likely to need booster shots?



<http://www.coloradokidswithdiabetes.org/>



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Welcome!



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Website Editors: Leah Wyckoff, MS, BSN, RN, NCSN & Andrea Houk, RN, CDE

COVID-19 AND DIABETES: Find current information

In Colorado, it is estimated that there are over 3,700 children who have been diagnosed with type 1 or type 2 diabetes. Research has shown that intensive management of diabetes helps decrease the long-term complication of the disease. Children with diabetes require special management of online casino and their health care needs at school/child care to allow them to access the same education and opportunities as their peers and to keep them safe at school/child care.

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STATE STANDARDS & GUIDELINES

- State Guidelines

SCHOOL NURSE TOOLKIT

- Nurse Files: includes care plans
- Training and Delegation
- School Handouts
- Additonal Resources

FAMILY TOOLKIT

- Parent & Family Files
- Tins for Teens



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Additional information

- American Diabetes Association:
<https://www.diabetes.org/coronavirus-covid-19/how-coronavirus-impacts-people-with-diabetes>



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