

Science Demonstrates Little to No Transmission in Schools

Safety of In-Person Learning

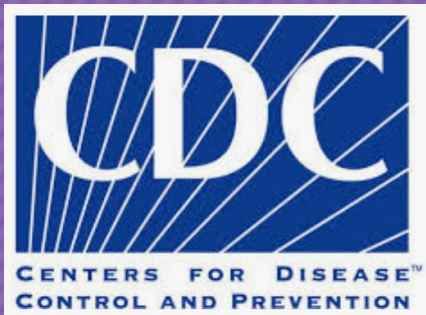
○ Centers for Disease Control

- Between March and December, minimal transmission in school
- Zero impact on community infection rates
- Community infection rates equal in those offering live and virtual instruction

○ Children's Hospital of Pennsylvania

- In-person learning reduces risk of children catching COVID
- “Schools may be islands of safety” – Dr. Susan Coffin

Scant spread in schools with basic mitigation



Wisconsin School Study

- 13 weeks - 191 cases
- Very low spread in school despite high community spread
 - *7 cases of in-school transmission to students (of 5000 students)*
 - *0 cases of in-school transmission to staff (of 700 staff)*

European and many US schools use 3 feet

- Minimal transmission of SARS-CoV-2 from paediatric COVID-19 cases in primary schools, Norway, August to November 2020

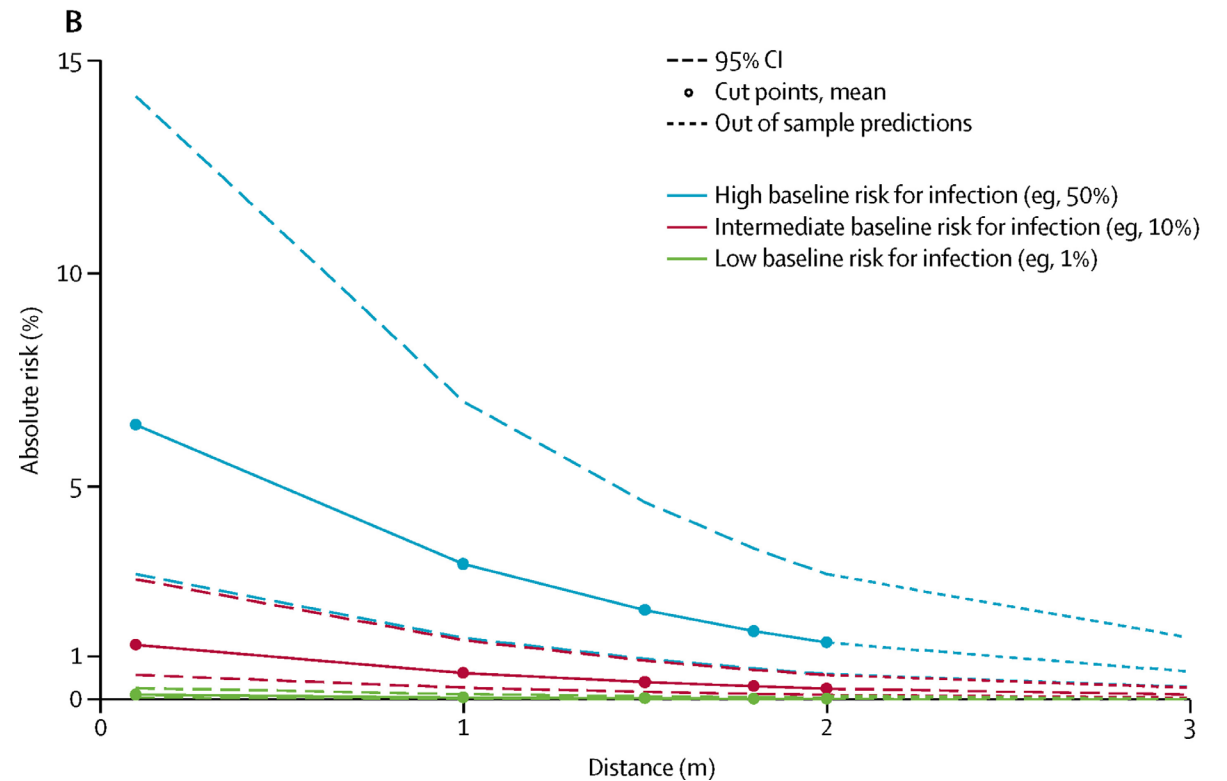
Age group (years)	Contact tracings	Index cases	Index likely infected in household	Asymptomatic index cases	Included contacts		Primary cases ^a	
					Children	Adults	Children	Adults
5–10	8	8 ^c	7 ^d	6	148	45	1	0
11–13	5	5	5	3	86	13	1	1

Interpersonal Distance

The science of 3 feet

Change in absolute risk with increasing distance

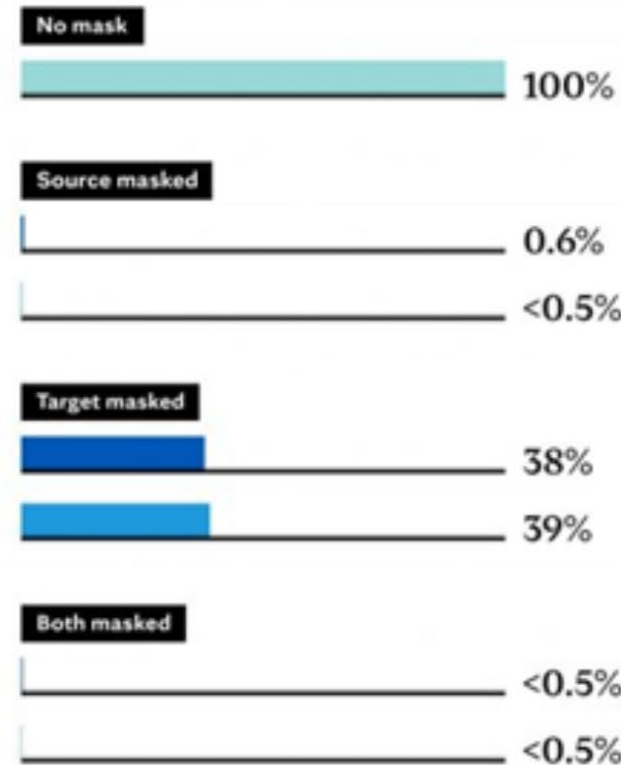
THE LANCET



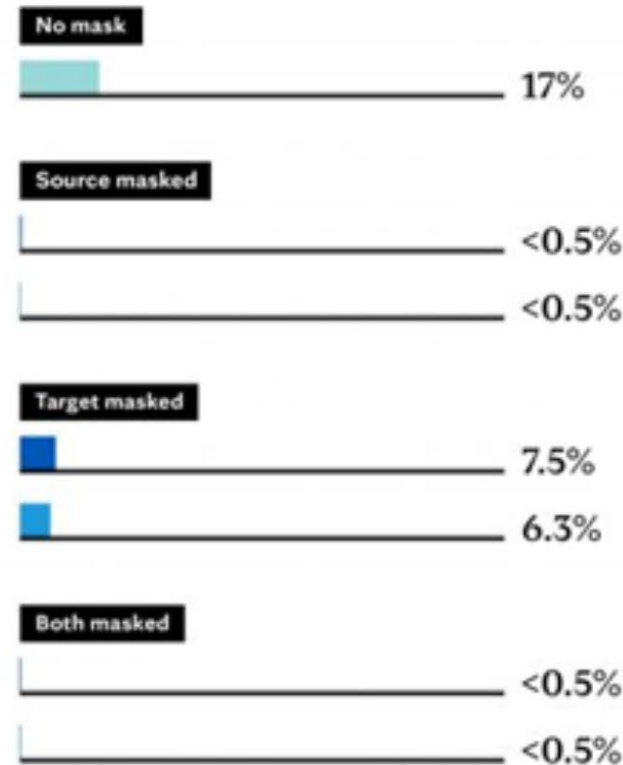
Exposure Risk Based on Masking and Distance

NO MASK DISPOSABLE MASK FABRIC MASK

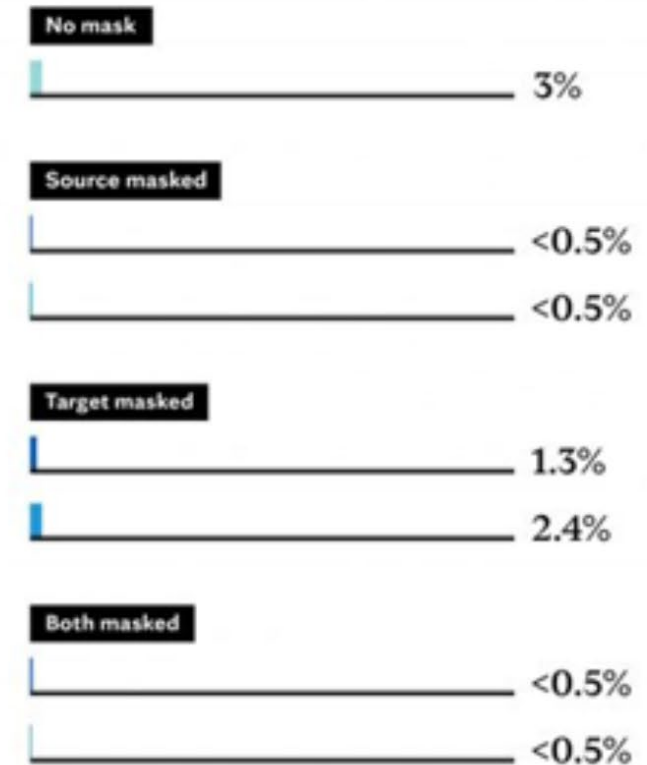
1-foot distance



3-foot distance



6-foot distance



Source = person with active COVID-19

Air Quality

Ventilation & Filtration

Harvard Healthy Buildings

- Four to six air exchanges per hour in classrooms
- Any combination of ventilation and filtration

GSA
Ventilation

Room Name	Floor Area sq. ft.	Clg. Ht.	Room Vol. cu. ft.	Unit Number	Rated CFM	Calculated ACH
Conference	260	10.5	2,730	AC-1	1,150	4.57
Head's Office	240	10.5	2,520			
Lobby/ Reception	417	11	4,587	AC-2	985	9.08
Workroom/ Corridor	415	10.5	4,358			
Server Room	n/a			AC-3		
Piano	255	10	2,550	AC-4	1,150	4.97
Strings	316	10	3,160			
Art	610	13	7,930	AC-5	1,150	6.9
Science	734	14	10,276	AC-6	1,150	8.94
4th Grade Classroom	570	13	7,410	AC-7	985	7.52
3rd Grade Classroom	570	13	7,410	AC-8	985	7.52
2nd Grade Classroom	570	13	7,410	AC-9	985	7.52
1st Grade Classroom	570	13	7,410	AC-11	985	7.52
Kinder Classroom	570	13	7,410	AC-10	985	7.52
Multi-Use Building	1,246	16.25	20,248	AC-12	2,400	8.44
Coach's Office	n/a			AC-13		
Middle School Classroom	368	10	3,680	AC-14	1,755	6.29
Middle School Classroom	368	10	3,680			
Middle School Classroom	368	10	3,680			
Middle School Office	275	10	2,750	AC-15	670	4.1
Elevator Equipment Room	n/a			AC-16		

Bottom line

- In-Person Learning is low risk to students and teachers
 - Three and 6 feet of distance are similar in risk
- Continue other safety precautions
 - Strong evidence to continue universal masking
 - Excellent GSA ventilation is further enhanced beyond best practices (4-6 exchanges/hour) by cracking windows or doors