Evolution of Contact Hours & COVID19

CLEAR LEARNING

CLEAR Call Webinar Series

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Timeline of Contact Hour (CH) Metric

- **Originally proposed in 1979 as a solution for virtual inspections given the FIDCR Monitoring System to measure compliance with group size and staff-child ratios standards.**

- **Fast forward to 2020 and again it being proposed for virtual inspections during the COVID19 pandemic but also used as a new metric to measure infection rates by correlating CH with where infections occur to determine if higher infection rates show any relationship to increasing CH.**

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Advantages of Using Contact Hour Metric

- Takes size of group into account.

- Can also keep track of exposure time for the group.

- Can be collected virtually, no need to go on site.

- Easy to collect, just ask a few questions.

- Can build in mitigation domain by measuring distance as well.

- Can potentially be a new metric that is more accurate than just knowing group size.

- Screening device for licensing agencies and parents to determine which facilities are overpopulated.

The Questions to Ask

- **When does your first teaching staff arrive or when does your facility open (TO1)?**

- **When does your last teaching staff leave or when does your facility close (TO2)?**

- **Number of teaching/caregiving staff (TA)?**

- **Number of children on your maximum enrollment day (NC)?**

- **When does your last child arrive (TH1)?**

- **When does your first child leave (TH2)?**

The CH Formula

- (1) CH = ((NC (TO + TH)) / 2) / TA;
  - (2) CH = (NC x TO) / TA;
  - (3) CH = ((NC x TO) / 2) / TA;
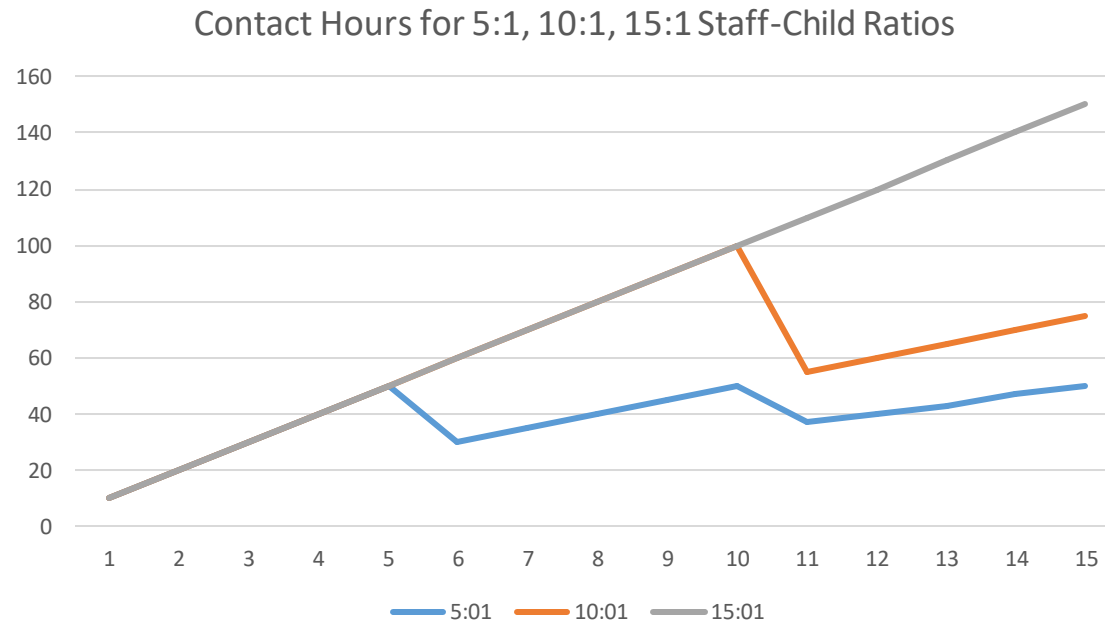   - (4) CH = (NC^2) / TA

- *Where: CH = Contact Hours; NC = Number of Children; TO = Total number of hours the facility is open (TO2 - TO1); TA = Total number of teaching staff, and TH = Total number of hours at full enrollment (TH2 - TH1).*

Contact Hour RWCH Conversion Table

NC	CH	1:1	2:1	3:1	4:1	5:1	6:1	7:1	8:1	9:1	10:1	11:1	12:1	13:1	14:1	15:1
1	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2	16	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16
3	24	8	12	24	24	24	24	24	24	24	24	24	24	24	24	24
4	32	8	16	16	32	32	32	32	32	32	32	32	32	32	32	32
5	40	8	13	20	20	40	40	40	40	40	40	40	40	40	40	40
6	48	8	16	24	24	24	48	48	48	48	48	48	48	48	48	48
7	56	8	14	19	28	28	28	56	56	56	56	56	56	56	56	56
8	64	8	16	21	32	32	32	32	64	64	64	64	64	64	64	64
9	72	8	14	24	24	36	36	36	36	72	72	72	72	72	72	72
10	80	8	16	20	27	40	40	40	40	40	80	80	80	80	80	80
11	88	8	15	22	29	29	44	44	44	44	44	88	88	88	88	88
12	96	8	16	24	32	32	48	48	48	48	48	48	96	96	96	96
13	104	8	15	21	26	35	35	52	52	52	52	52	52	104	104	104
14	112	8	16	22	28	37	37	56	56	56	56	56	56	56	112	112
15	120	8	15	24	30	40	40	40	60	60	60	60	60	60	60	120
16	128	8	16	21	32	32	43	43	64	64	64	64	64	64	64	64
17	136	8	15	23	27	34	45	45	45	68	68	68	68	68	68	68
18	144	8	16	24	29	36	48	48	48	72	72	72	72	72	72	72
19	152	8	15	22	30	38	38	51	51	51	76	76	76	76	76	76
20	160	8	16	23	32	40	40	53	53	53	80	80	80	80	80	80
21	168	8	15	24	28	34	42	56	56	56	56	84	84	84	84	84
22	176	8	16	22	29	35	44	44	59	59	59	88	88	88	88	88
23	184	8	15	23	31	37	46	46	61	61	61	61	92	92	92	92
24	192	8	16	24	32	38	48	48	64	64	64	64	96	96	96	96
25	200	8	15	22	29	40	40	50	50	67	67	67	67	100	100	100
26	208	8	16	23	30	35	42	52	52	69	69	69	69	104	104	104
27	216	8	15	24	31	36	43	54	54	72	72	72	72	72	108	108
28	224	8	16	22	32	37	45	56	56	56	75	75	75	75	112	112
29	232	8	15	23	29	39	46	46	58	58	77	77	77	77	77	116
30	240	8	16	24	30	40	48	48	60	60	80	80	80	80	80	120

Graphic Depicting Contact Hours for Selected Staff-Child Ratios

Contact Hours for 5:1, 10:1, 15:1 Staff-Child Ratios

Contact Hour Infection Rate Threshold Grid

High	10	10	20	30	40	50	60	70	80	90	100
	9	9	18	27	36	45	54	63	72	81	90
	8	8	16	24	32	40	48	56	64	72	80
	7	7	14	21	28	35	42	49	56	63	70
	6	6	12	18	24	30	36	42	48	54	60
Num	5	5	10	15	20	25	30	35	40	45	50
	4	4	8	12	16	20	24	28	32	36	40
	3	3	6	9	12	15	18	21	24	27	30
	2	2	4	6	8	10	12	14	16	18	20
Low	1	1	2	3	4	5	6	7	8	9	10
	0	1	2	3	4	5	6	7	8	9	10
				<----		Time	---->				

How to Use Contact Hours

- **C**OVID19 **Correlations:**
  - ✓ Can be used just with CH and tracking COVID19 infections.
  - ✓ Would be a new use in tracking infections. What are the thresholds?
  - ✓ Can be expanded to build in a distance domain (square feet).

- **Group Size and Staff-Child Ratio Compliance:**
  - ✓ Can be used in its present configuration.
  - ✓ Use the RWCH Table of Conversions with specific staff-child ratios.
  - ✓ Can be done virtually.

Resources and References

- For more detailed descriptions of the models and methodologies please see the following Powerpoint presentations by Rosner and Fiene (2020); Fiene and Stevens (2020) available on http://RIKInstitute.com.

- You will find both slide decks on the introductory page of the website along with other resources available.

- You will find many additional resources on the RIKIllc website describing Dr Fiene's Differential Monitoring, Risk Assessment, and Key Indicator methodologies.

- Also, feel free to contact Dr Fiene directly. His contact information is on the following slide.

Contact Information

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