

Infection Prevention and Control Training Needs and Preferences Among Frontline Health Professionals

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Background

- In 2020, the Nebraska Infection Control Assessment and Promotion program (ICAP) collaborated with the Nebraska Department of Health and Human Services (NE DHHS) and the Centers for Disease Control's (CDC's) Project Firstline to distribute infection prevention and control (IPC) training to frontline healthcare professionals (HCPs)
- ICAP's frontline HCP training efforts focused on nursing assistants (NAs), dentists, and other groups not traditionally targeted by IPC training.
- We conducted a learning needs assessment of these workers to identify self-perceived gaps in these HCP's IPC knowledge base and to plan high-yield curricula for each group.

Methods

- We distributed an online survey to Nebraska's frontline HCPs via local professional society email lists and the NE DHHS's weekly newsletter.
- The survey asked respondents to identify their:
 - Professional role
 - Practice setting (urban vs suburban vs rural)
 - Perceived trustworthiness of potential educational sources (e.g. academia vs local health departments vs the CDC)
 - Preferred format(s) of training
 - Perceived competency and need for additional training across specific IPC topics.
 - Perceived barriers to participating in IPC training

Survey Population

456 HCPs completed our survey, including 177 NAs, 72 nurses, and 59 dentists; most HCPs described their practice setting as rural (62%) or urban (34.2%).

Self-identified professional role:	#	%	Primary workplace setting:	#	%
Certified Nursing Aid	147	32.2%	Nursing home	157	34.4%
Dentist	59	12.9%	Assisted living facility	67	14.7%
Registered nurse (RN)	52	11.4%	Private Practice	50	11.0%
Healthcare administrator	39	8.6%	Critical access hospital	38	8.3%
Other	39	8.6%	Acute care hospital	33	7.2%
Pharmacist	22	4.8%	Other	33	7.2%
Infection Preventionist	20	4.4%	Home health	20	4.4%
Licensed practical nurse (LPN)	20	4.4%	Pharmacy	18	3.9%
Nursing Aide	14	3.1%	Long-term acute care hospital	15	3.3%
Patient Care Tech	11	2.4%	Other outpatient facility	6	1.3%
Emergency medical technician	5	1.1%	Outpatient dialysis facility	5	1.1%
Social services	5	1.1%	Federally Qualified Health Center	4	0.9%
Dental Hygienist	4	0.9%	Corporate Dental Office	3	0.7%
Nursing assistant	4	0.9%	Territory/Freely Associated State health department	3	0.7%
Physician	4	0.9%	Public Health	2	0.4%
Non-clinical support staff	3	0.7%	Local health department	1	0.2%
Dental hygienist/ assistant	2	0.4%	State health department	1	0.2%
Environmental services	2	0.4%			
Health educator	2	0.4%			
Dental Assistant	1	0.2%			
Patient Care Assistant	1	0.2%			

Frontline HCPs wanted additional training in Triage and Screening, not hand hygiene or effective PPE use:

Which of the following infection control topics would you like to receive additional training in?	Other frontline HCPs (n=190)				
	NAs (n=201)	Dental (n=65)		#	%
Triage and screening	117	22	93	232	50.9%
COVID-19	94	27	104	225	49.3%
Source control	94	26	102	222	48.7%
Environmental cleaning	57	32	99	188	41.2%
Personal protective equipment (PPE)	44	17	63	124	27.2%
Hand hygiene	15	9	29	53	11.6%
Other	7	6	11	24	5.3%

Triage and screening was the only IPC training topic a majority of all respondents (51%) requested, though majorities of nurses (58%) and dentists (51%) also wanted training on environmental cleaning. Hand hygiene (12%) and PPE use (27%) were the least requested IPC topics, especially among NAs (5% and 18%).

Frontline HCPs, particularly NAs, trust the CDC vs alternative training sources

Which of the following sources would you trust to administer training related to infection control concepts and protocols?	Other frontline HCPs (n=190)				
	NAs (n=201)	Dental (n=65)		#	%
Centers for Disease Control and Prevention (CDC)	178	60	181	419	91.9%
State or local health departments	124	40	160	324	71.1%
Professional associations (e.g., American Medical Association [AMA])	95	53	143	291	63.8%
Academic institutions	59	46	89	194	42.5%

The most frequently cited barriers to IPC training included lack of time and cost

What barriers do you anticipate preventing you from taking or getting value out of IPC training?	Other frontline HCPs (n=190)				
	NAs (n=201)	Dental (n=65)		#	%
Competing priorities/ Time: I have other commitments that prevent me from attending infection control training	87	43	131	261	57.2%
Courses are too expensive, no reimbursement available	120	19	95	234	51.3%
Availability: Infection control courses are not offered in my area or courses not offered often	60	26	57	143	31.4%
Other	22	5	9	36	7.9%
Need: Infection control training is not required for my position	18	2	12	32	7.0%
Technology: No access to computer system or internet	14	0	4	18	3.9%

Self-paced learning was the most popular training format across groups:

What format(s) do you prefer for learning?	Other frontline HCPs (n=190)				
	NAs (n=201)	Dental (n=65)		#	%
Self-paced learning	127	36	126	289	63.4%
Interactive discussion with an expert	102	32	109	243	53.3%
Interactive discussion with a group of peers	79	20	83	182	39.9%
Listening to a lecture	34	41	81	156	34.2%
Prefer a live online training	60	14	83	157	34.4%
Prefer a previously recorded training	59	18	29	106	23.2%

Conclusion

Nebraska's frontline HCPs express high confidence in the CDC as a source of IPC training and prefer self-paced learning modalities. Key between-group differences indicate that individualizing curricula for NAs, dentists, and other HCPs may improve IPC training quality.