

University of Nebraska Medical Center Nebraska Medicine

Resources Needed by Critical Access Hospitals to Address Identified Infection Prevention and Control Program Gaps Mounica Soma, MHA, MSPM^{1,2}, Jody Scebold, EdD, MSN, RN, CIC^{1,2}, Angela Vasa, MSN, RN¹, Teresa Ann Fitzgerald, RN, BSN, CIC², Kate Tyner, BSN, RN, CIC^{1,2}, Satya Kumar Lalam, MS³, Sue Beach, BA¹, Muhammad Salman Ashraf, MBBS^{1,2,4}

BACKGROUND		Table 2. Needs/Resources for the commonly identified Infection Prevention and Control Gaps (>50% "No" and "Not Sure")				
Critical Access Hospitals (CAH) usually have limited resources and their infection		Commonly Identified Gap* Gap		Top 3 Cited/Most Requested Resources**		
prevention and control (IPC) programs face significan	t challenges and gaps.		Frequency			
 Since little is known about the resources needed by CAHs to strengthen their IPC program, a National Infection Control Strengthening (NICS) needs assessment survey was deployed to CAHs across HHS Region VII (Kansas, Iowa, Nebraska and Missouri). The assessment sought to identify needs and direct the development of resources. 		Absence of a drug diversion program	78% 74% 74%	 A policy/protocol template inclusive of steps to follow in a investigation of drug tampering An educational resource to train personnel on drug diversion A guide for creating and implementing a drug diversion 		
to mitigate IPC program gaps in small and rural hospitals, including CAHs.		Lack of audits and feedback for		 program Standardized safe injection practices audit tool (template or mobile app to assist audits) Educational resources to train personnel on how to 		
METHODS		safe injection practices				
 The needs assessment survey was developed by infe NICS project, leveraging data obtained from the Infe Response (ICAR) gap analyses from surveys conducted 	The needs assessment survey was developed by infection preventionists' on the NICS project, leveraging data obtained from the Infection Control Assessment and			 Provide and receive feedback Educational resources to train personnel to perform audits 		
 A 49-question Research Electronic Data Capture (REI email to infection preventionists in Region VII CAHs. 	insertion and maintenance for Central Venous Catheters (CVCs)	 Itemplate or mobile app to assist audits) Educational resources to train personnel on how to provide and receive feedback Educational resources to train personnel to perform audit 				
 The survey had 4 sections with questions focused on IPC program infrastructure, competency-based training, audit and feedback, and identification and isolation of high-risk pathogens/serious communicable diseases. An expected answer for every question was a "yes" indicating best practice recommendations. An IPC practice score was assigned to each CAH by totaling "yes" responses. A "no" or "not sure" response was considered an IPC gap. Respondents who selected "no" were asked to identify resources that would assist in mitigating identified gaps (by selecting from a list of options or identifying others not on list). Descriptive analyses evaluated frequency of gaps and most cited resources. Welch's t-test, was used to study differences in IPC practice scores between states. 		Failure to conduct a risk assessment for the laboratory, identify what tests can safely be offered to provide appropriate clinical care for a Person Under	74%	 Risk Assessment Template Mitigation toolkit Stable workforce (e.g., mitigation strategies for staff turnover) Access to ongoing equipment readiness guidance 		
		Investigation (PUI) Lack of audits and feedback for insertion and maintenance of (indwelling) urinary catheters	60%	 Standardized urinary catheter insertion and maintenance audit tool Educational resources to train personnel on how to provide and receive feedback 		
				Educational resources to train personnel to perform audits		
Table 1. Characteristics of the hospitals participated in the online survey		Lack of audits and feedback on adherence to reprocessing procedures for critical devices	58%	 Standardized audit tool for reprocessing critical devices (template or mobile app to assist audits) Educational resources to train personnel on how to provide and receive feedback 		
Characteristics	N=51			Educational resource to train personnel to perform audits		
Number (%) CAH (Critical Access Hospital)	50 (98.04%)	Lack of audits and feedback on	58%	Standardized audit tool for IP practices related to SSI		
Number (%) ACH (Acute Care Hospital)	1 (1.96%)	adherence to recommended IC		prevention		
Number (%) completed all sections of the survey	38 (74.5%)	Infection (SSI) prevention		and receive feedback		
Number (%) participated nospitals in Nebraska				 Dedicated FTE for performing audits 		
Number (%) participated hospitals in Iowa	10(31.37%)	Lack of audits and feedback on	56%	Standardized cleaning and disinfection procedure audit		
Number (%) participated hospitals in Missouri	I (I.90%)	adherence to cleaning and		tool		
Rod size: Modian (Range)	0(0/0) 25 (10 - 25)	disinfection procedures		 Educational resource to train personnel on how to perform audits provide and receive feedback 		
IPC Practice Score: Median (Range)	23(10-23) 31(13-18)			 Dedicated FTE for performing audits 		
Figure 1. Overall IPC Gap Percent by Section*		Lack of audits and feedback on adherence to reprocessing	56%	 Standardized audit tool for reprocessing semi-critical devices 		
Frequency of Identified IPC Gaps (N=51)		procedures for semi-critical devices		 Dedicated FTE for performing audits A tool or database for storing audit and feedback data 		
Section I: IPC Program Infrastructure 21.40%		Facility procedures lacking consultation with the Infection Prevention program upon purchase of new equipment or	53%	 A procedure template for new products/purchases that incorporates IP program consultation Focus of regulatory authorities during surveys Leadership buy-in 		
		products Lack of audits and feedback on	51%	Standardized audit tool for IP practices related to CDI		
Section IIB: Audit and Feedback Section III: Serious Communicable Diseases or High-Risk Pathogens	13.43%	adherence to recommended infection control practices for <i>Clostridioides difficile</i> infection (CDI) prevention		 Prevention Educational resources to train personnel on how to perform audits and provide and receive feedback Dedicated FTE for performing audits 		
0% 5% 10% 1	5% 20% 25% 30% 35% 40% 45% 50%	Note. FTE, full-time equivalent; IP, infection prevention. *Commonly identified gaps refer to those infection prevention and o	control practices that we	re marked "No" & "Not Sure" by >50% of the respondents.		

*Frequency calculated based on average "no" and "not sure" responses of all the questions for that specific section

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**The top 3 cited/most requested resources are based on the responses provided by CAHs that do not have a procedure/process in place.



Figure 2b. Frequency of IPC Gaps Related to Competency-Based Training



Figure 2c. Frequency of IPC Gaps Related to Audit and Feedback



high-ri Proces SCD is (n=39) Proces PUI su <u>(n=39</u>) Proces PUI susp-Have p care of Figures 2a, 2b, 2c and 2d:

- The authors have no relevant conflicts of interest with regard to the content of this poster

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Figure 2d. Frequency of IPC Gaps Related to Serious Communicable diseases/ High-Risk Pathogen

Section III: Serious Communicab	le Disease	e or Hig	<mark>jh-Risk</mark> P	athogen	
Conduct laboratory risk assessment, identify what tests can safely be offered to provide clinical care for a person under investigation (PUI) (n=38)	26%		47%		Most Need
Plan to process Category A hazardous substance waste generated during care of PUI or confirmed serious communicable disease (SCD) (n=39)	23%	21%			_
Have an air-borne infection isolation room (AIIR) in which to rapidly isolate a PUI who requires additional evaluation (n=40)	23%	3%			
System in place for asking/identifying isolation status and needs of patients transferring to your facility from another facility (n=38)	13% 5%				
Process to coordinate and support transfer of a PUI or confirmed SCD/high-risk pathogen to another facility based on jurisdictional guidance (n=38)	8% 21%	,			
Personnel anticipated to provide care for a PUI received competency-based training on donning & doffing of PPE that would be used for a SCD (n=39)	8% 5%				
Travel and symptom screening at all points of entry that allows for rapid identification of a SCD or high-risk pathogen (n=39)	8% 0%				
Protocol/plan in place to notify jurisdictional public health authorities when a PUI is identified (n=38)	5% 13%				
System for early detection and rapid isolation of infectious patients identified during their hospital stay (n=39)	5% 5%				
Process to guide staff on next steps when PUI for a high-risk pathogen is identified (n=39)	3%5%				
Process to guide staff on next steps when PUI for a SCD is identified thru travel/symptom screening (n=39)	3% 8%				
Process to guide the selection and use of PPE for a PUI suspected/confirmed with a high-risk pathogen (n=39)	<mark>39</mark> 6 5%				
Process to guide the selection and use of PPE for a PUI suspected/confirmed with a SCD (n=39)	3%3%				
Have personal protective respiratory equipment for care of patients in AII (N95/PAPRs) (n=39)	0%				Least Need
Percent No** Percent	0% 10% 209 Not Sure**	% 30% Perce	40% 50% nt of IPC gaps	60% 70% 80%	- • %

*Topic areas represent the questions asked on the survey; "n" represents count of all yes, no, and not sure responses combined for each IPC practice.

**The graphs include only the "No" and "Not Sure" response data of the participating facilities in Region VII. A "No" response indicates that the facility doesn't have the specific procedure/process/program currently in place while a "Not Sure" response indicates that the respondent is unsure of having a specific procedure/process/program in place.

RESULTS

• Of 259 total licensed CAHs in Region VII, 50 CAHs and 1 small NE hospital (not licensed as CAH but included in the analyses as CAH) participated in the survey. The CAH response rate accounted to 19.30%.

Majority (n=38) responded to all sections with IPC scores ranging from 13 to 48 (Table 1). Overall, IPC practice gaps were most frequently identified in Audit and Feedback section (Figure 1), but varying level of gaps was present for different IPC practices in all 4 sections (Figures 2a, 2b, 2c and 2d). There was no significant difference between IPC practice scores of CAHs in NE and IA (average score 33 vs 36; p = 0.38)

Most of the "commonly identified IPC practice gaps" (defined as > 50% of "no" and "not sure" responses) in CAHs were related to audit and feedback practices (Table 2). Additional commonly identified gaps included lack of drug diversion program, absence of input from IPC team prior to purchasing equipment and failure to conduct risk assessment for the laboratory.

Most CAHs cited a standardized audit tool and staff training materials as much needed resources (Table 2).

• After analysis of the survey results, a summary report was developed and sent to survey participants. The report included web-based links to resources for the most cited needs for each of the survey sections.

CONCLUSION

• CAHs included in this sample clearly demonstrated that there is a pressing need for resources and mitigation strategies to strengthen audit and feedback practices across multiple practice areas within their IPC programs. Ongoing focus on additional resource development to support infection preventionists in CAHs is essential to advance IPC programs in this setting.

• Small sample size and lack of demographic data are the major limitations of the study. There is a need for future studies with larger sample size to identify the needs for IPC programs in CAHs across the US.

DISCLOSURE

ACKNOWLEDGEMENT

The project described in this poster was supported by Federal Award Number NU38CK00048 from the Centers for Disease Control and Prevention