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# Abstract

#### Background

Dialysis services are expected to meet quality metrics as conditions of coverage for The Joint Commission. The use of scorecards improved the ability to monitor quality in areas for infection prevention and safety. A two-phase quality improvement project was undertaken to evaluate the perceived usefulness and usability of Dialysis Service Scorecard (DSS) among 12 regional hospital partners.

#### Method

In phase I the DSS was designed, developed and piloted. Five key Joint Commission metrics were assessed. Scorecard data collection, staff training, report building, and six-month outcomes were presented to the leadership team at the pilot facility. In Phase II regional leader teams were surveyed to determine the DSS's perceived usefulness and usability for monitoring safety quality indicators using a 20-item electronic survey.

#### Results

Responder roles ranged from Nurse Executives to Infection Preventionist's at both urban (n=8) and rural (n=2) hospitals. The majority of hospitals (n=6) were urban facilities with less than 500 hundred beds. Most (90%) leaders reported previous use, 60% found the DSS "extremely useful" and 40% found the DSS "useful".

#### Conclusion

Dialysis Service Scorecards readily identify areas that are lacking in quality performance standards providing hospital leaders with a valuable quality performance management tool.

# Introduction

- Dialysis has been identified as one of the top areas for concern in infection prevention and safety (Bland, 2018)
- Research supports the incorporation of scorecards into healthcare systems for improved quality outcomes (Lupi, Verzola, Carandina, Salini, Antonioli and Gregorio, 2011)
- It is important for stakeholders to be involved when metrics are changed or introduced (Gunawardena, 2011)
- Stakeholders should understand the perceived usefulness and usability of a system before making a decision to implement (Davis, 1989)

# **PICOT Question**

What is the perceived usefulness and usability of a "Dialysis scorecard" as part of a quarterly Dialysis Services Quality Report among hospital partners?

# Inpatient Outsourced Dialysis: Scorecards Usefulness and Usability for Monitoring Patient Safety

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# Methods

#### Phase I

A single facility was chosen to pilot a DSS for reporting.

- Excel spreadsheet created and used as scorecard Data collected from electronic charting system,
- reports, and manual audits
- Data collection completed for 6 months of services; 1,483 number of dialysis patient encounters
- Completed scorecard presented to leadership at quarterly (Q2) meeting and focus group

**Dialysis Service Scorecard (DSS) Quality Metrics** 

Dialysis Scorecard										Definition	Data Received Farmer		
January 20xx											Deunidon:	Data Received From:	
			,	Monthly	19 2022		Ve	at to Date					
		Montniy			Cuttent #								
	.ba	tatus	ctual	larget	ariance	TD is	Actual	urren arget TD	ariance	Yr End	Yr End		
mprove Performance	4	ō.	<	F	>	ά×	110	0 H X	>	Target	Projection		
anical Outcomes												preventable pt care event that resulted in transfer	
Adverse Events	M				0				0	5		to higher level of care	Aces
Hepatitits B Documentation	M				0%				0%	100%		Hep B lab results obtained on every pt	Hospital/Dialysis clinics/ACEs
Handoff Report given to RN	M				0%				0%	100%		RN to RN report before and after dialysis	ACES
Water Quality Tracking	М				0%				0%	100%		water culture testing performed monthly with required follow up documented	Dialysis BioMed report
CVC Site Documentation	м				0%				0%	100%		RN documented assessment and dressing change on central line	ACES
Equipment Maintenance	м				0%				0%	100%		Performance maintanence completed & documented timely	Dialysis BioMed report
Sustomer Loyalty													
Patient Complaints	M				0				0	12		Patient, physican or staff reported complaints	Hospital or physician
Patient Delays	M				0%				0%	10%		% of patients with a documented delay	ACES
inancial Outcomes													
										170		Patients receiving dialysis on the same day as	
Pts w/ Dialysis same day Discharge	M			<u> </u>	0	-		<u> </u>	0	150		discharge	Charge nurse report
Incomplete procedure after set up	M				U				0	12		Documented incomplete pt procedure	ACES/billing
Employee Retention	M				0%				0%	90%		# employes left Fresenius/Total # employes	Fresenius data
rowth													
Pt Volumes Overall	M												
2:1	M												
1:1	М												
CRRT	M												
TPE	M												
CCPD/CAPD	M												

# Phase II

Perceived Usefulness and Usability of Dialysis Scorecard electronic survey

- DSS Survey is a 20-item electronic questionnaire composed of 7 demographic and 13 item 5-point Likert Perceived Usefulness and Perceived Ease of Use Questionnaire (Davis, 1989). First 7 questions of survey being demographic were utilized for reliability purposes where 90% of respondents reported previous scorecard use.
- Survey questions imbedded within DSS presentation
- The 13 use and usability questions score range was 13 (not useful/not easy) to 65 (very useful/very easy). For results interpretation it was decided a high score (52 to 65) equaled a positive perception and a low score (13 to 26) a negative perception
- Distributed to key stakeholder directors and quality managers (N=20) at all12 partnering facilities; response rate was 50% (N=10)

ed Usefulness and Perceived Fase of Use (Da

1989)										
On a scale of using the Dia accomplish t	<sup>-</sup> 1-5, wit Iysis Sc asks me	h 5 bein orecard ore quic	ig extrei in your kly? *	mely like job enal	ely, how ole you 1	likely would o				
	1	2	3	4	5					
extremely unlikely	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	extremely likely				
On a scale of 1-5, with 5 being extremely likely, how likely would using the Dialysis Scorecard improve your job performance? *										
	1	2	3	4	5					
extremely unlikely	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	extremely likely				
On a scale of using the Dia	1-5, wit lysis Sc	h 5 bein orecard	ig extrei Report	nely like increase	ely, how e your p	likely would roductivity? *				

# Results

# Phase I – DSS Presentation and Focus Group

• DSS printed and presented in person to CNO, ACNO, and Director. DSS received positive feedback and its continued use was requested

# Phase II – Dialysis Service Scorecard (DSS) Survey **Demographics**

- The respondents (N=10): 3 nursing executives; 1 director; 3 nurse managers; 2 infection preventionist's; 1 regulatory/quality coordinator
- Types of facilities: 7 respondents from urban facilities less than 500 beds; 2 respondents from rural facilities less than 200 beds; 1 respondent from urban facility greater than 500 beds

### Perceived Usefulness and Perceived Ease of Use

• The mean score was 44.8 out of 65 representing an overall (68.9%) positive view of the DSS as a useful and useable tool

#### Use and usability survey results with scores

Perceived Usefulness (Davis, 1989)						
On a scale of 1-5, with 5 being the highest ranking:	1	2	3	4	5	total
what score would you give to scorecards as a management tool?	1			4	5	42
how likely would using the Dialysis Scorecard in your job enable you to accomplish tasks more quickly?				4	6	46
how likely would using the Dialysis Scorecard improve your job performance?			1	5	4	43
how likely would using the Dialysis Scorecard Report increase your productivity?	1		1	5	3	39
how likely would using the Dialysis Scorecard Report enhance your effectiveness on the job?	1		1	3	5	41
how likely would using the Dialysis Scorecard Report make it easier to do your job?				4	6	46
how useful would you find the Dialysis Scorecard in your job?				4	6	46

Perceived Ease of Use (Davis, 1989)						
On a scale of 1-5, with 5 being the highest ranking:	1	2	3	4	5	total
how likely would learning to operate (Excel report) the Dialysis Scorecard Report be easy for you?				2	8	48
how likely would you find it easy to get the Dialysis Scorecard Report to do what you want it to do?				4	6	46
how likely would you find data on the Dialysis Scorecard Report easy to locate?			1	1	8	47
how likely would you find data from the Dialysis Scorecard Report clear and understandable?			1	1	8	47
how likely would you find the Dialysis Scorecard Report to be flexible to interact with?			1	3	6	45
how likely would you find the Dialysis Scorecard Report easy to use?			1	1	8	47

# Phase I

A DSS was created and piloted in an isolated hospital. The initial feedback received was positive with the incorporation of a DSS and requested its continued use and an unanticipated facility response for metric changes. The changes requested led to phase II where a report and survey was created introducing the DSS as a quality tool meant to supplement the already provided quality report.

#### Phase II

The quality report is a multi-page report with large amounts of data, the DSS would be a supplemental resource provided to the hospital. The results of the survey on the usefulness and usability of the DSS supported the use of scorecards as a valuable and effective supplemental quality improvement management tool. With an overall positive average score it can be concluded that hospital facilities will find value if more usable and useful data were provided from their outsourced dialysis provider. While quality data is provided on a quarterly basis, this information comes in the form of a multi-page report. Facility leadership personnel are busy individuals, to provide a supplement to the report, where the same information is provided only in a concise single page workbook, is a crucial resource.

In conclusion, hospital leadership view scorecards as a positive addition to their management toolkits. Giving hospitals an easy-to-interpret tool that allows for month over month trending will create an atmosphere allowing easier identification of improvement areas, thus resulting in an overall advancement in quality patient care while improving the efficiency of the inpatient dialysis program.

Bland, A. (2018). Joint Commission surveyors hone in on dialysis safety. Retrieved from https://www.jointcommission.org/ambulatory buzz/joint commission surveyors hone in on\_dialysis\_safety/

# Discussion

# Conclusion

#### References

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340. Retrieved from https://doiorg.libproxy.txstate.edu/10.2307/249008

Lupi, S., Verzola, A., Carandina, G., Salani, M., Antonioli, P., & Gregorio, P. (2011). Multidimensional evaluation of performance with experimental application of balanced scorecard: A two year experience. Cost Effectiveness & Resource Allocation, 9(1), 5p. doi:10.1186/1478-7547-9-7

Gunawardena, I. (2011). Balanced scorecards: A quality improvement intervention. British Journal of Healthcare Management, 17(8), 338-344. Retrieved from http://libproxy.txstate.edu/login?url=http://search.ebscohost.com.libproxy.txstate.edu/login. aspx?direct=true&db=ccm&AN=104682059&site=ehost-live&scope=site



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