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

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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

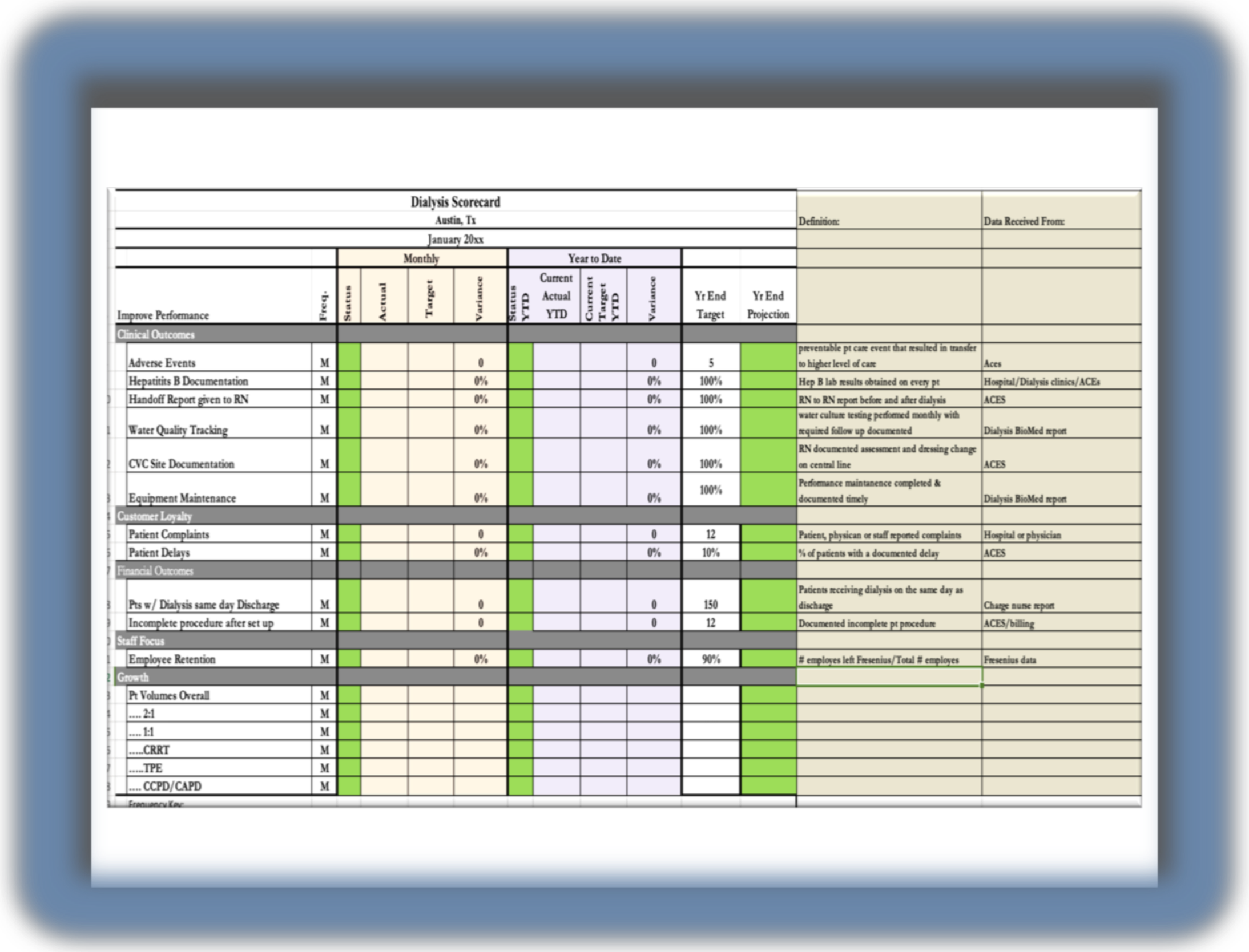
What is the perceived usefulness and usability of a "Dialysis scorecard" as part of a quarterly Dialysis Services Quality Report among hospital partners?

Methods

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

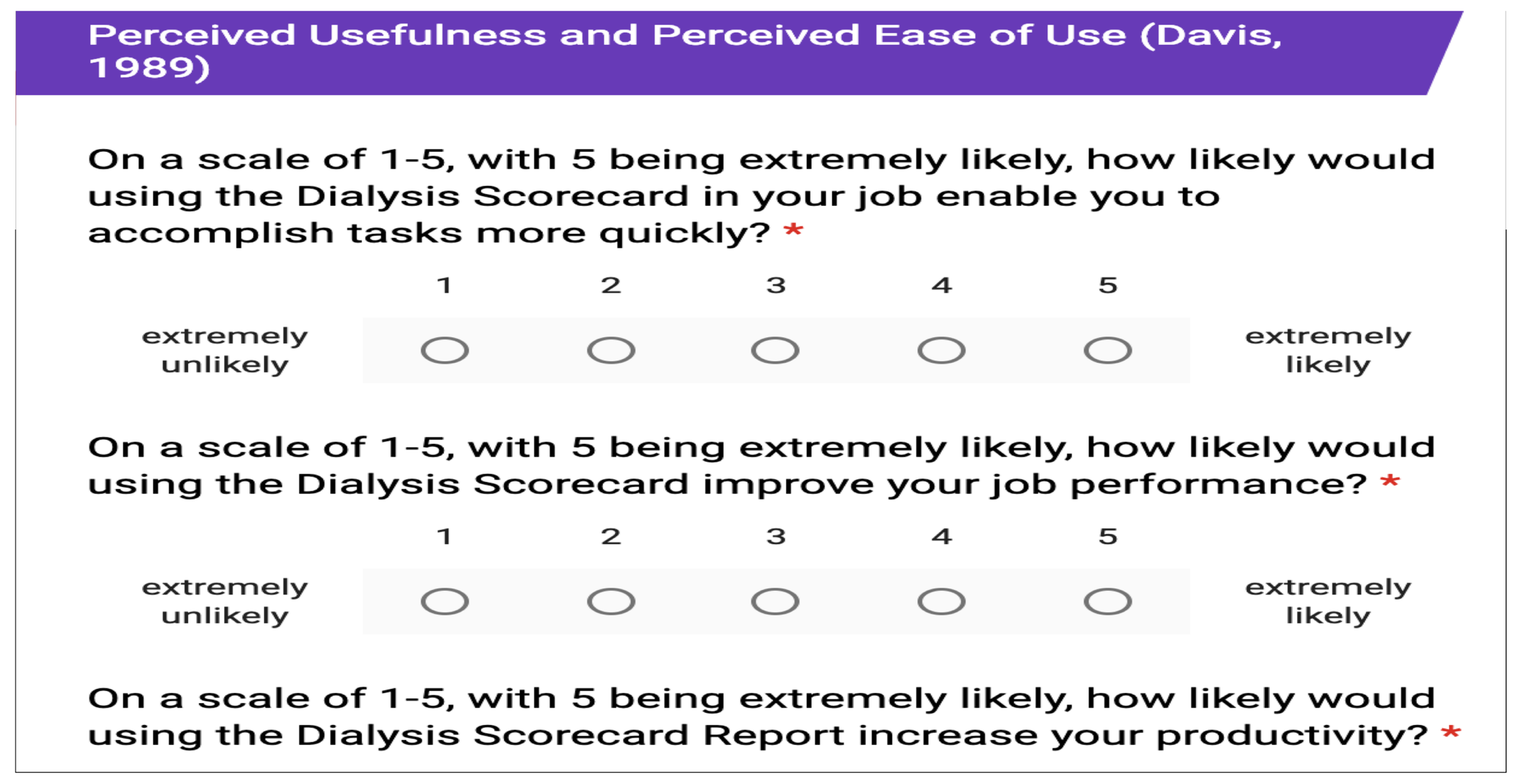
- Excel spreadsheet created and used as scorecard
- Data collected from electronic charting system, reports, and manual audits
- Data collection completed for 6 months of services; 1,483 number of dialysis patient encounters
- Completed scorecard presented to leadership at quarterly (Q2) meeting and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

Dialysis Service Scorecard (DSS) Quality Metrics



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)



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

Discussion

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.

Conclusion

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.

References

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/

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://doi-org.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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