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**The Balanced Scorecard:
A Quality Assurance System
for College Health**



Kevin Readdean, MEd, LMHC
Rensselaer Polytechnic Institute
NYSCHA/NECHA
2011 Annual Meeting


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Overview/Objectives

- Evidence Based Management
- Strategic Planning
- Quality Assurance
- Learning Outcomes and Metrics
- Balanced Scorecard
 - Vision and Mission
 - Objectives and Measures
 - Four Perspectives
 - Reporting Tool
- Build a Balanced Scorecard




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Quality Assurance

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"I have a delivery for you: 1000 pens with the slogan 'Excellence is in the Details' and 500 factory-second, slightly irregular coffee mugs that say 'Quality Matters'."



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Evidence Based Management

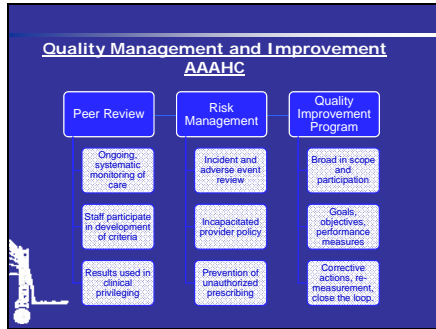
<p>Health Care Journals</p> <ul style="list-style-type: none"> • Journal of the American Medical Association • New England Journal of Medicine • Journal of American College Health • Journal of Primary Care • Journal of Adolescent Health • Journal of College Student Psychotherapy • Journal of Clinical Psychiatry • American Journal of Health Behavior • Journal of Infectious Diseases • Annals of Family Medicine 	<p>Health Management Journals</p> <ul style="list-style-type: none"> • Journal of Health Care Management • Journal for Healthcare Quality • Journal of Health Services Research and Policy • Journal of Healthcare Resource Management • Evaluation & the Health Professions • Health Care Management Review • Health Care Strategic Management • Health Policy Health Policy & Planning • Healthcare Financial Management
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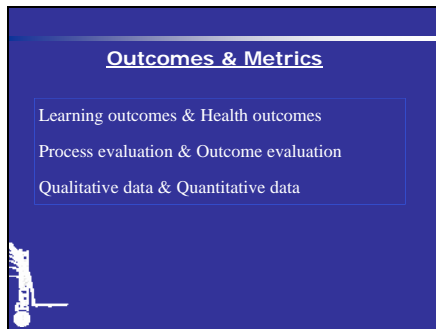
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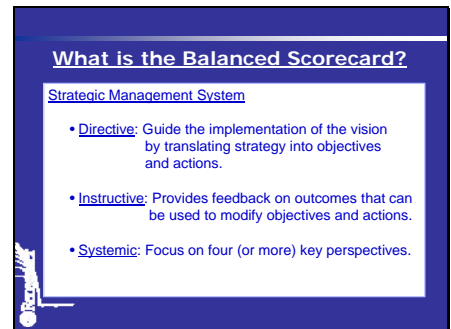
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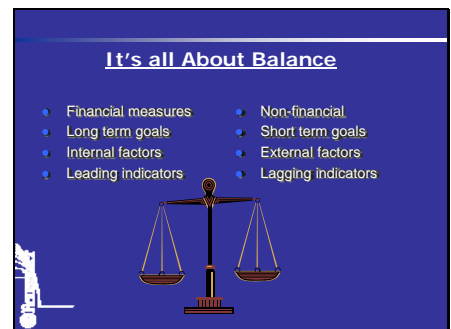
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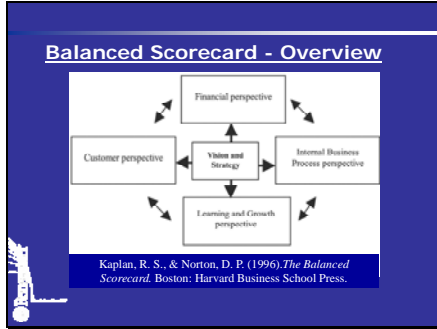
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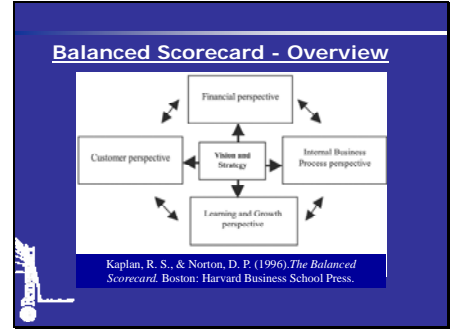
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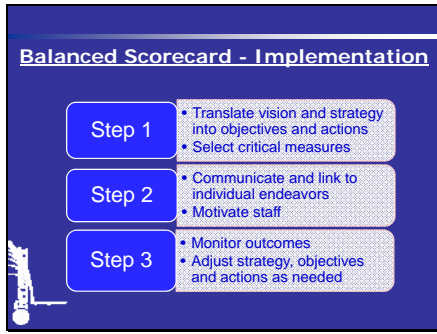
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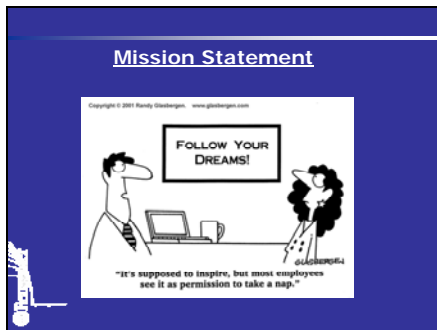
Customer Perspective

Questions:

- How do our customers/patients see us?
- How do we create sustainable value for our customers?
- How is customer demand satisfied?

Objectives	Maintain strong customer satisfaction
Measures	Web-based satisfaction survey
Targets	Overall satisfaction: medical services = 85%; counseling services = 90%
Initiatives	Scheduling w/in 24 hours, on-time or explain, staff introductions, clarify directions

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Internal Perspective

Questions:

- What must we excel at?
- What key operational processes are most critical?

Objectives	Increase knowledge about alcohol, decrease risk behaviors, and increase protective behaviors of PRIME program participants.
Measures	Pre- and Post Tests
Targets	Statistically significant changes from pre- to post-test.
Initiatives	PRIME alcohol education class offered to judicially mandated students.

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Innovation/Learning Perspective

Questions:

- What can we improve?
- What internal processes need to be enhanced?

Objectives	Maintain an active peer review system for counseling services.
Measures	Consistency between intake notes and diagnosis; suicide assessment where appropriate; appropriateness of care
Targets	90% compliance in all three measures
Initiatives	Peer review of 5 charts per provider at the end of each semester.

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Building a Balanced Scorecard

	Strategic Objectives	Strategic Measures	Target outcomes	Initiatives
Customer				
Internal				
Innovation – Learning				
Financial				

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Financial Perspective

Questions:


- What return on investment do we provide our customers?
- What is the value added for the customer?

Objectives	Monitor cost-of-care. Minimize medical supply costs.
Measures	Unit costs of 20 most commonly used medical supplies for 3 vendors.
Targets	Order supplies from most cost-effective source.
Initiatives	Analyzed medical supply costs; Modified ordering where appropriate.

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Balanced Scorecard: Reporting Tool

	Objectives	Measures/Target	Outcome	Action Plan
Customer				
Internal				
Innovation – Learning				
Financial				

Rensselaer Student Health Center Balanced Scorecard^{1,2,3} FY 2010

	Strategic Quality Assurance Objectives	Strategic Measurements	Outcomes
Customer	Maintain strong customer satisfaction. ⁴	Web-based patient satisfaction surveys.	2009-2010 Overall Satisfaction: Medical = 87% (n=2701), Counseling = 94% (n=205).
	Provide culturally appropriate services to diverse populations. ⁵	Service utilization data by subpopulations.	Spring 2010 utilization data suggests that two underrepresented ethnic groups are not using SHC services in proportion to (or above) their representation in the general population.
	Ensure access to services (w/in 24 hours medical & w/in 5 days counseling for 90% of students). ^{6, 7}	Satisfaction survey question re: time to scheduled appointment.	2009-2010 Satisfaction Survey data reveal most students are given timely appointment: Medical = 93%, Counseling = 89%.
	Offer dynamic Health Education/Outreach programs based on needs assessment. ⁸	NCHA data ⁹ ; Program Evaluations	"Program added to my knowledge of this topic." (SA=1-SD=5) Average = 1.74, 7 topic areas, n=893 of 1200.
Internal	Achieve full MMR compliance by December 1. ¹⁰	Percentage of students who have fulfilled the MMR requirement.	Fall 2009 compliance at 99.4%.
	Conduct at least two evidence-based medical treatment outcome study per year. ¹¹	As outlined in Asthma management ¹² QI study and Pharyngitis ^{13, 14} QI study	Met 2 of 4 thresholds in the asthma study ^{10*} . Met 1 of 4 thresholds in pharyngitis study ^{11*} .
	Increase knowledge about alcohol, decrease risk behaviors, and increase protective behaviors of PRIME program participants. ¹⁵	Pre- and Post-tests	A statistically significant increase in knowledge from pre-test to post-test was found (n=40; t=16.4065, p < 0.0001).
	Measure response to counseling outreach message given in Abnormal Psychology Class.	Counseling Impact Scale	Reported perception of counseling impact on behaviors increased from pre- to post-intervention (2.377, n=69 to 2.544, n=68).
Professional Development	Maintain active counseling peer review system. ¹⁶	Counseling Services Peer Review Data	49 charts reviewed: positive outcomes for documentation and appropriateness of care; deficiencies noted in intake diagnoses.
	Support the attendance of clinical providers at a minimum of one professional conference per year. ¹⁷	Percentage of providers attending a professional conference; number of CME/CEU obtained.	100% of staff attended 65 professional development events earning a total of 228.75 CME credits.
	Increase the use of electronic charting by medical staff; use of EHR scenario by all staff, for at least one condition, by year end. ¹⁸	Number of staff using scenario; number of scenarios being used.	100% of medical staff are using the 13 medical EHR forms that have been developed to date.
Financial	Implement a high-value, low-cost health insurance program. ¹⁹	Benefit value for premium of new insurance bid.	RPF Bid process reduced 2010-2011 insurance premium by 22% while enhancing Rx benefit.
	Conduct one cost-of-care study per year. ¹¹	Benchmark cost-of-care in college or community setting: Pharyngitis study; Medical Supplies.	Two cost of care studies conducted. Determined most cost effective drug to treat Pharyngitis and most cost effective vendor for medical supplies.

Rensselaer Student Health Center Balanced Scorecard - FY 2010

Strategic Quality Assurance Objectives	Strategic Measurements	Outcomes				Action/Plan																																				
Maintain strong customer satisfaction. ⁴	Web-based patient satisfaction surveys.	2009-2010 Overall Satisfaction: Medical = 87%, Counseling = 94%				Address issues identified in medical services. Continue to administer surveys.																																				
Provide culturally appropriate services to diverse populations. ⁵	Service utilization data by subpopulations.	<table border="1"> <thead> <tr> <th><u>Ethnicity</u></th> <th><u>RPI</u></th> <th><u>Counseling</u></th> <th><u>Medical</u></th> </tr> </thead> <tbody> <tr> <td>African American (Bl)</td> <td>3%</td> <td>3%</td> <td>3%</td> </tr> <tr> <td>Asian (As)</td> <td>9%</td> <td>7%</td> <td>14%</td> </tr> <tr> <td>Hawaiian/Pacific Is.</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Hispanic (H_)</td> <td>5%</td> <td>3%</td> <td>4%</td> </tr> <tr> <td>Multiple Ethnicities Reported</td> <td>2%</td> <td>4%</td> <td>5%</td> </tr> <tr> <td>Native American/Alaskan (Al)</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>No Ethnicity Reported</td> <td>0%</td> <td>5%</td> <td>6%</td> </tr> <tr> <td>White</td> <td>81%</td> <td>77%</td> <td>68%</td> </tr> </tbody> </table>				<u>Ethnicity</u>	<u>RPI</u>	<u>Counseling</u>	<u>Medical</u>	African American (Bl)	3%	3%	3%	Asian (As)	9%	7%	14%	Hawaiian/Pacific Is.	0%	0%	0%	Hispanic (H_)	5%	3%	4%	Multiple Ethnicities Reported	2%	4%	5%	Native American/Alaskan (Al)	0%	0%	0%	No Ethnicity Reported	0%	5%	6%	White	81%	77%	68%	Preliminary, one semester data. Continue to monitor before developing action plan.
		<u>Ethnicity</u>	<u>RPI</u>	<u>Counseling</u>	<u>Medical</u>																																					
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Ensure access to services(w/in 24 hrs. health & 5 days counseling for 90% of students). ^{6,7}	Satisfaction survey question re: time to scheduled appointment.	2009-2010 Satisfaction Survey data reveal most appointments are given timely appointment: Medical = 93%, Counseling = 89%				Continue to monitor time to scheduled appointment.																																				
Offer dynamic Health Education/Outreach programs based on needs assessment. ⁸	American College Health Association National College Health Assessment (NCHA) Data. ⁹	<p align="center">Fall 2009 Needs Assessment (NCHA) n=1331</p> <ul style="list-style-type: none"> • Respondents top 3 reported health related academic impacts in past 12 months: Stress (25%), Sleep (18.3%), Cold/Flu (18.3%) • Any alcohol use in past 30 days: general population=59%, athletes=69%, Greeks=88%; In general, alcohol related risk factors were highest & protective factors were lowest among Greeks & Athletes, vs. non-Greeks & non-Athletes. • 30 day condom use (mostly or always) = 63% for vaginal sex, 29% for anal sex, 5% for oral sex • Average BMI = 23.7 (healthy weight); 48% met national exercise requirements²⁰ 				Increase stress, sleep and exercise programs; Target alcohol programming to Greeks and Athletes; Continue safer sex education programming																																				
	Program Evaluations: "program added to my knowledge" strongly agree (1) to strongly disagree (5)	<table border="1"> <thead> <tr> <th><u>Topic Area</u></th> <th><u>N</u></th> <th><u>Evaluation Rating</u></th> </tr> </thead> <tbody> <tr> <td>Alcohol</td> <td>83</td> <td>1.8</td> </tr> <tr> <td>Nutrition</td> <td>24</td> <td>1.8</td> </tr> <tr> <td>PRIME</td> <td>39</td> <td>1.9</td> </tr> <tr> <td>Safe Zone</td> <td>489</td> <td>1.8</td> </tr> <tr> <td>Safer Sex</td> <td>206</td> <td>1.6</td> </tr> <tr> <td>Sexual Assault</td> <td>43</td> <td>1.5</td> </tr> <tr> <td>Stress</td> <td>9</td> <td>1.6</td> </tr> </tbody> </table>			<u>Topic Area</u>	<u>N</u>	<u>Evaluation Rating</u>	Alcohol	83	1.8	Nutrition	24	1.8	PRIME	39	1.9	Safe Zone	489	1.8	Safer Sex	206	1.6	Sexual Assault	43	1.5	Stress	9	1.6	Lowest impact: PRIME is mandated program; improvements planned to Safe Zone program													
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Rensselaer Student Health Center Balanced Scorecard - FY 2010

	Strategic Quality Assurance Objectives	Strategic Measurements	Outcomes	Action/Plan
Internal	Achieve full MMR compliance by December 1. ¹⁰	Percentage of students who have fulfilled the MMR requirement.	Fall 2009 compliance at 99.4%.	Continue to monitor.
	Conduct at least two evidence-based medical treatment outcome study per year. ¹¹	As outlined in Asthma management ¹² QI study.	Met NHLBI treatment and education thresholds; below threshold for PFT administration.*	Create electronic asthma flow sheet in EHR; re-study in fall.
		As outlined in Pharyngitis ^{13,14} QI study.	Met one of four thresholds based on CDC criteria. ^{8*}	Educate Medical Staff; Develop form that includes criteria and CDC treatment recommendations, re-study fall 2010.
	Increase knowledge about alcohol, decrease risk behaviors, and increase protective behaviors of PRIME program participants. ¹⁵	Pre- and Post-tests	A statistically significant increase in knowledge from pre-test ($\mu = 46.25\%$) to post-test ($\mu = 83.75\%$) was found ($n=40$; $t=16.4065$, $p < 0.0001$).	Increase number of test items from 10 to 20 to assess additional content.
Measure response to counseling outreach message.	Counseling Impact Scale - 5 point scale, based on Stages of Change Theory, measuring student perception of counseling impact on their behaviors (1=no impact to 5=significant impact).	Reported perception of counseling impact on behaviors increased from pre- to post-intervention (2.377, $n=69$ to 2.544, $n=68$).*	Re-study with utilization of a control group to improve confidence in findings.	

* see complete study for details

Rensselaer Student Health Center Balanced Scorecard - FY 2010

	Strategic Quality Assurance Objectives	Strategic Measurements	Outcomes	Action/Plan
Financial	Implement a high-value, low-cost health insurance program. ¹⁹	Benefit value for premium of new insurance bid.	RPF Bid process reduced 2010-2011 insurance premium by 22% while enhancing Rx benefit.	Re-bid in 5 years or sooner if necessary.
	Conduct at least one cost-of-care study per year. ¹¹	Benchmark cost-of-care in college or community setting: Pharyngitis ^{13, 14} QI study.	Determined most cost effective first line agent should be Amoxicillin 500 TID (for non-penicillin allergic students)*.	Educate Medical Staff, Include recommended 1st, 2nd, and 3rd line Rx on EHR.
		Benchmark cost-of-care in college or community setting: Medical Supplies QI study.	McKesson Medical was the most cost effective vendor for medical supplies*.	Re-study in 3 years.

* see complete study for details

Footnotes

- 1 Kaplan, R. S., & Norton, D. P. (1996). Using the balanced scorecard as a strategic management system. *Harvard Business Review*, 74 (1), 75-85.
- 2 Gurd, B. & Gao, T. (2008). Lives in the balance: An analysis of the balanced scorecard (BSC) in healthcare organizations. *Journal of Productivity and Performance Management*, 57(1), 6-21.
- 3 Zelman, W. N., Pink, G. H. & Matthias, C. B. (2003). Use of the balance scorecard in health care. *Journal of Healthcare Finance*, 29(4), 1-16.
- 4 Campbell, T. A., Auerbach, S. M., & Kiesler, D. J. (2007). Relationship of Interpersonal Behaviors and Health-Related Control Appraisals to Patient Satisfaction and Compliance in a University Health Center. *Journal of American College Health*, 55(6), 333-340.
- 5 Hoban, M. T. & Ward, R. L. (2003). Building culturally competent college health programs. *Journal of American College Health*, 52(3), 137-141.
- 6 Murray M. (2000). Same-day appointments: exploding the access paradigm. *Family Practice Management*, 7(8): 45-50.
- 7 Eisenberg, D. , Golberstein, E. & Gollust, S. E. (2007). Help-Seeking and Access to Mental Health Care in a University Student Population. *Medical Care*, 45(7), 594-601.
- 8 American College Health Association (2001). Standards of Practice for Health Promotion in Higher Education. Linthicum, MD: American College Health Task Force on Health Promotion in Higher Education.
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- 15 Beadnell, B., Nason, M., & Rosengren, D. B. (2009). Comparative impact of PRIME For Life in North Carolina: 2007-2009. Manuscript in preparation.
- 16 Gillig, P. M. & Barr, A. (1999). A model for multidisciplinary peer review and supervision of behavioral health clinicians. *Community Mental Health Journal*, 35(4), 361-365.
- 17 Miller, S. H., Thompson, J. N., Mazmanian, P. E., Aparicio, A. Davis, D. A., Spivey, B. E., & Kahn, N. B. (2008). Continuing medical education, professional development, and requirements for medical licensure: A white paper of the conjoint committee on continuing medical education. *Journal of Continuing Education in the Health Professions*, 28(2), 95-98.

¹⁸ Steinfeld, B., Ekorenrud, B., Gillett, C., Quirk, M. & Eytan, T. 2006). EMRs Bring all of Healthcare Together. Behavioral Healthcare, 26(1), 13-17.

¹⁹ American College Health Association (ACHA) (2008). Standards for Student Health Insurance/Benefits Programs. Linthicum, MD.

²⁰ US Department of Health and Human Services. (2008). Physical Activity Guidelines for Americans. Washington D.C.