Retention of Nurses in Wyoming

Nurse Advisory Committee Meeting

Casper, Wyoming

May 19, 2008

Research & Planning

Wyoming Department of Employment

Tom Gallagher, Manager

About Research & Planning

- **Our Organization:** R&P is a separate, exclusively statistical entity.

- **What We Do:** R&P collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards.

- **Our Customers:** LMI makes the labor market more efficient by providing the public and the public's representatives with the basis for informed decision making.

What is Labor Market Information?

- **"Labor Market Information** (LMI) is an applied science; it is the systematic collection and analysis of data which describes and predicts the relationship between labor demand and supply."

  The States' Labor Market Information Review, ICESA, 1995, p. 7.
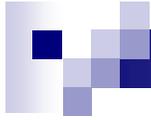
The Purpose of Science Is Prediction

Retention Study Purposes and History

1. Move beyond the administrative records approach begun in 2001 to an integrated administrative records and survey strategy.

2. Focus on workplace issues amendable to management (survey scaled items) to enhance retention.

3. Identify the influence of other factors such as community ties and spouse's job on retention.

4. Develop and design lower cost systems for continuous monitoring.

5. Does workplace satisfaction matter? Can we attain predictive validity from survey research?

Constructs Influencing Job Quality: A General Model
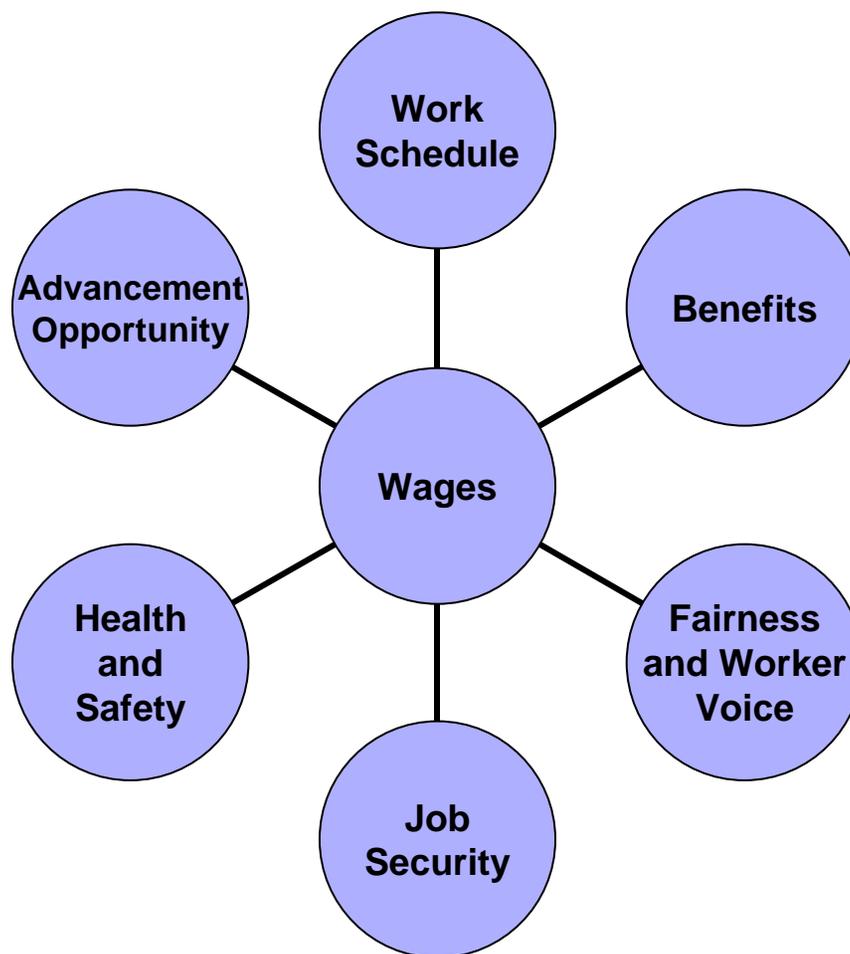
Source: Center for Law and Social Policy, http://clasp.org/publications/oaw_paper1_full.pdf

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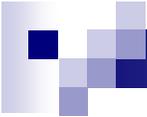
Using Survey Data to Interpret Administrative Records
(Survey Reference Period: June-July 2007)

Comparison of High School Location and SSN State of Origin: Measuring Nativity

SSN State of Origin	Reported High School Location[a]			
	Wyoming		Out of State	
Wyoming	845	0.87	50	0.04
Out of State	124	0.13	1,313	0.96
Total	**969**	**1.00**	**1,363**	**1.00**
Unknown	57			

[a]Nursing Survey Question 55, "Where did you last attend high school?"
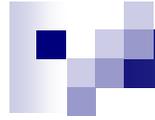
Break
10:00-10:15
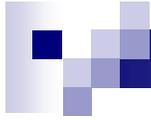
Predictive Validity
10:15-10:45

Ambulatory Health Care Exit Rates

Ambulatory Nurses Who Indicated an Intention to Leave Their Primary Employer Within One Year

Status	Number	Percentage
Not Found Working in Wyoming During 2007Q2	5	6.0%
Working in Wyoming During 2007Q2	78	94.0%
Total	**83**	**100.0%**
Working for the Same Primary Employer in Both 2007Q2 and 2007Q4	45	54.2%
Total	**83**	**100.0%**

Note: These nurses have only had two quarters to leave.

Hospital and Long-Term Care Exit Rates

Hospital and Long-Term Care Nurses Who Indicated an Intention to Leave Their Primary Employer Within One Year

Status	Number	Percentage
Not Found Working in Wyoming During 2007Q3	23	7.3%
Working in Wyoming During 2007Q3	292	92.7%
Total	**315**	**100.0%**
Working for the Same Primary Employer in Both 2007Q3 and 2007Q4	242	76.8%
Total	**315**	**100.0%**

Note: These nurses have only had one quarter to leave.

Estimated Accuracy of Stated Intent to Leave Employment

Hospitals and Long Term Care Facilities		
Quarters Following Survey	% RNs who indicated intent to leave and left Wyoming	% RNs who indicated intent to leave primary employer and are projected to do so
1	7.3%	23.2%
2	7.8%	41.0%
3	8.4%	54.7%
4	9.0%	65.2%

Ambulatory Care Facilities		
Quarters Following Survey	% RNs who indicated intent to leave and left Wyoming	% RNs who indicated intent to leave primary employer and are projected to do so
1	6.0%	45.8%
2	6.4%	70.6%
3	6.8%	84.1%
4	7.2%	91.4%
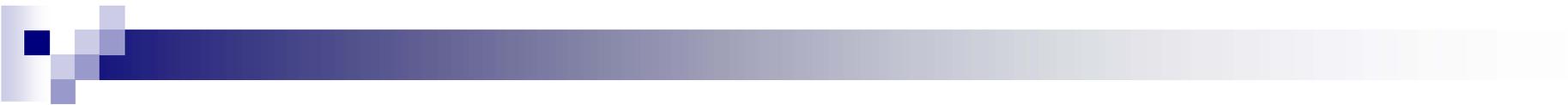
Making the Leap From Modeling to Prediction: Purpose

- We modeled stated intent to leave, but…

- What happens after that?

- Combine questionnaire and administrative data.

- Early snapshot of actual behavior.

Methodology

- Assign RNs to primary employer in third quarter 2007 (2007Q3).

- Calculate hospital employer-level exit rates for **all** RNs in 2007Q3.

- Calculate hospital employer-level average scaled item scores from questionnaire.

- Create scatter plots of results.

- Focus on hospitals.

- Z-scored questionnaire items.

Figure 1: Wyoming Firm-Level RN Exit Rates (Hospitals) and Salary Satisfaction Scores (Question 21), 2007Q3

R² becomes larger if we use a nonlinear model.

$y = -0.0421x + 0.1732$
$R^2 = 0.3451$

Z-Score of Salary Satisfaction
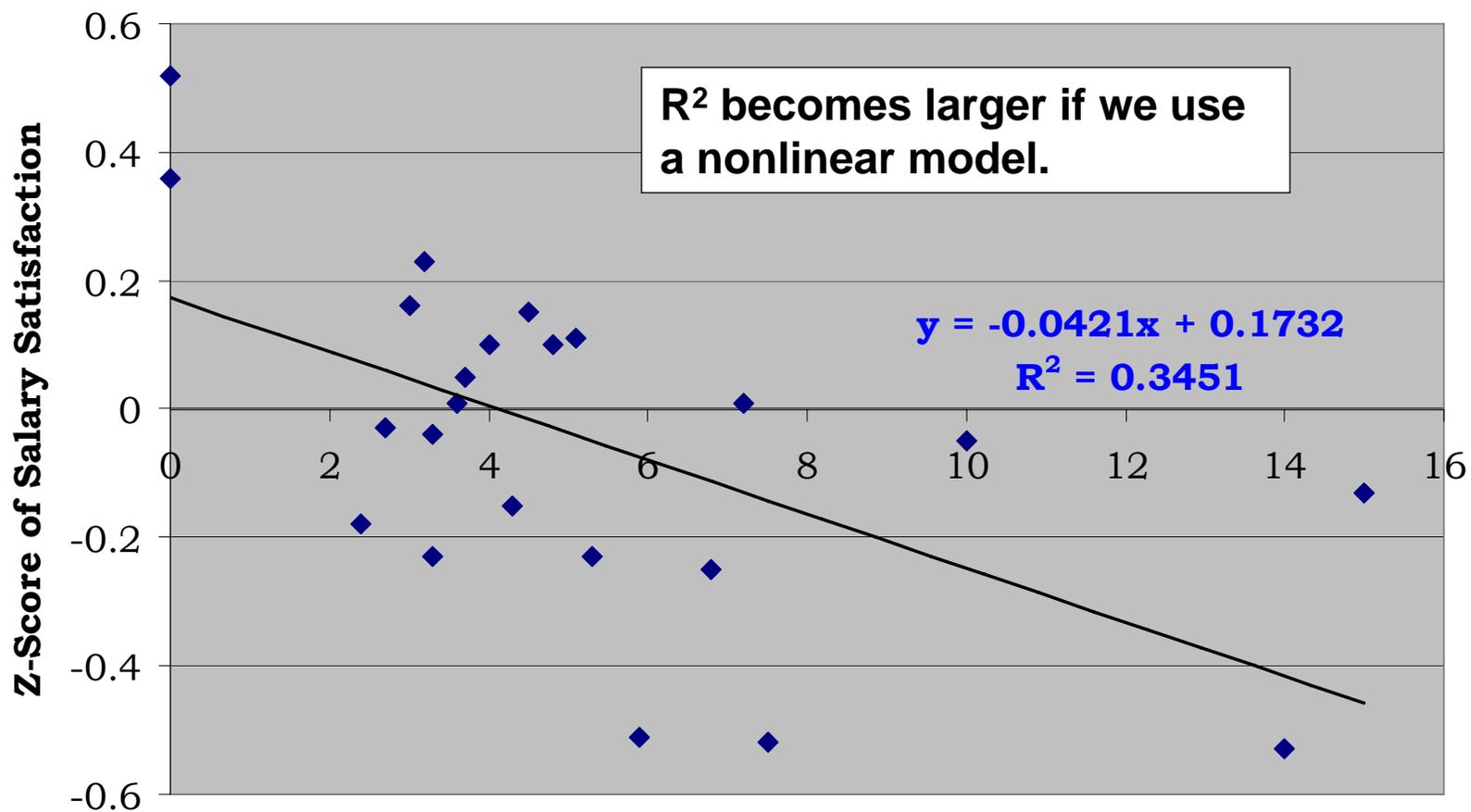
RN Exit Rate (Hospitals)

N (Exit Rates) = 2,214
N (Satisfaction) = 1,531

Figure 2: Wyoming Firm-Level RN Exit Rates from Hospitals Versus Feelings of Being Tied to the Community (Question 69), 2007Q3

$y = 0.0231x - 0.1318$

$R^2 = 0.1982$

We expected this line to have a negative slope.
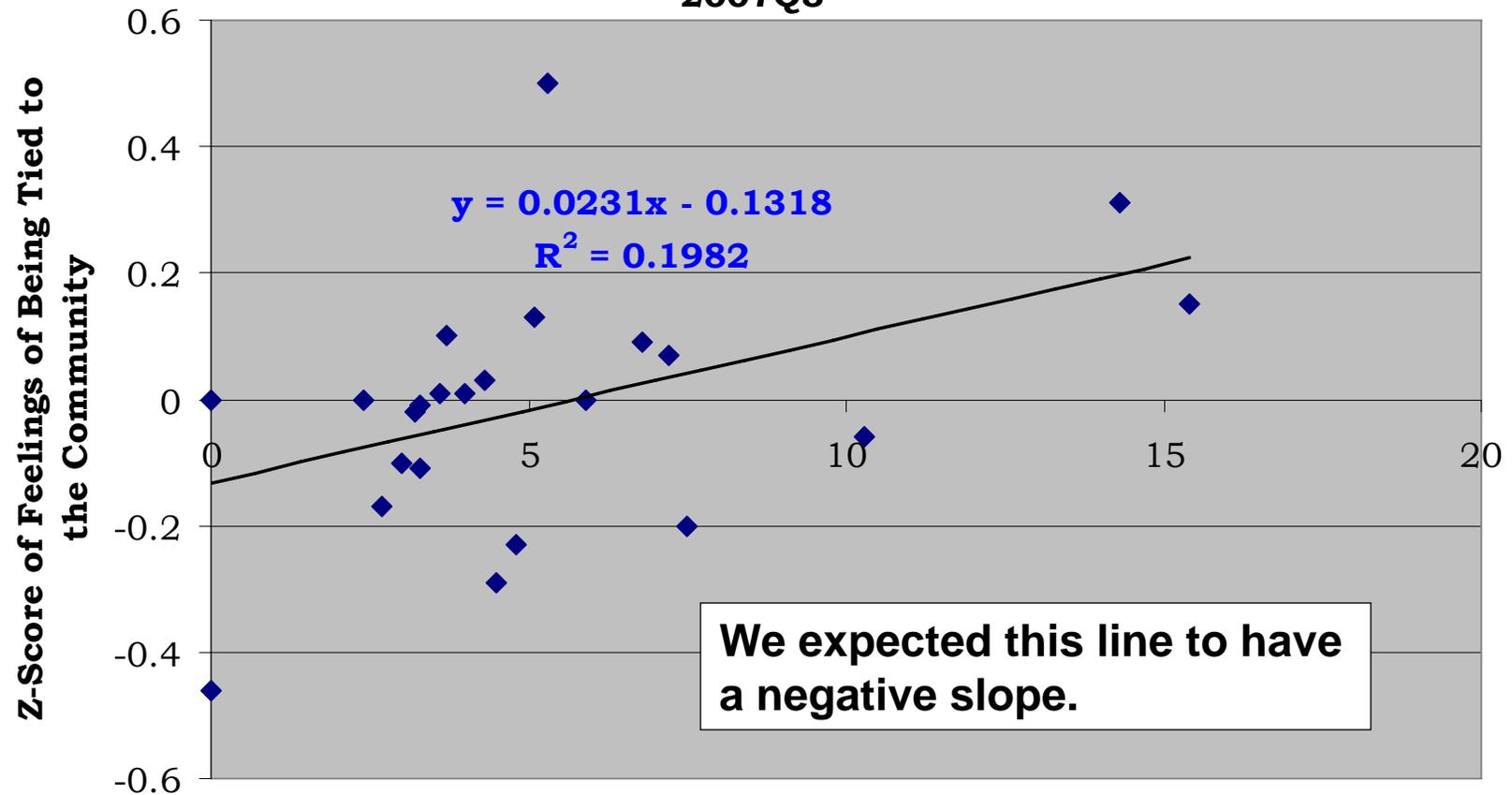
N (Exit Rates) = 2,214
N (Satisfaction) = 1,531

Figure 3: Wyoming Firm-Level RN Exit Rates from Hospitals and Professional Development Satisfaction Scores (Questions 34, 43, 44, and 45), 2007Q3

$y = -0.0329x + 0.0163$

$R^2 = 0.1222$
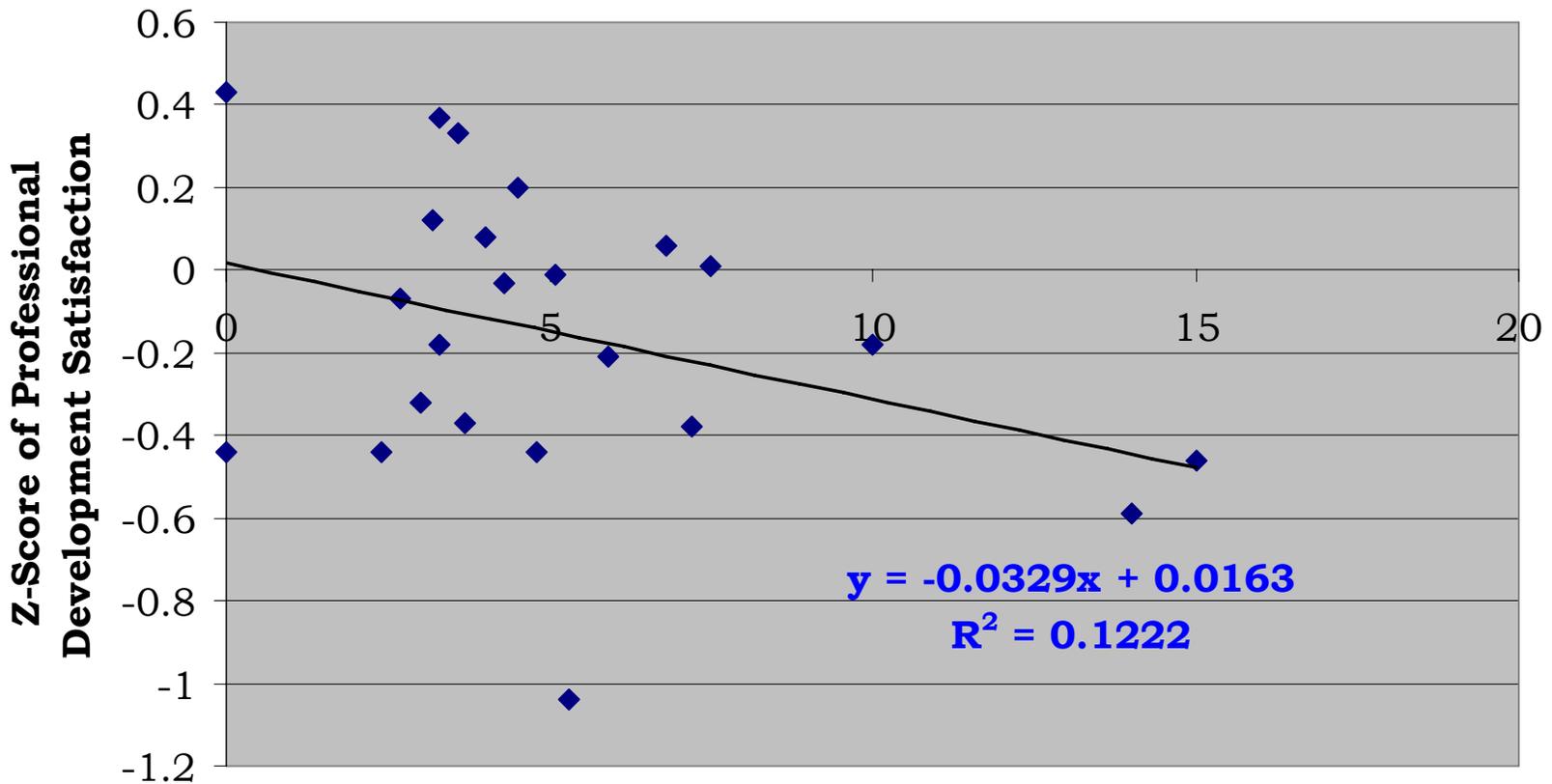
N (Exit Rates) = 2,214
N (Satisfaction) = 1,531

Summary

- Question 6 asked if RNs planned to leave their primary facility within 12 months.

- With available data, we tested factors identified in the model by using actual exit rates one quarter later.

- Some evidence supports the model, and some does not.

- Repeat the tests when 2008Q2 and four quarters of behavior data become available.
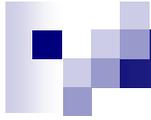
Does Workplace Satisfaction Matter?
10:45-11:45

Modeling Intent to Leave Primary Employer: Using Questionnaire Scaled Items of Workplace Satisfaction and Other Elements

- **Analysis performed in two parts:**
  - Part I: Exploratory Factor Analysis
  - Part II: Binary Logistic Regression
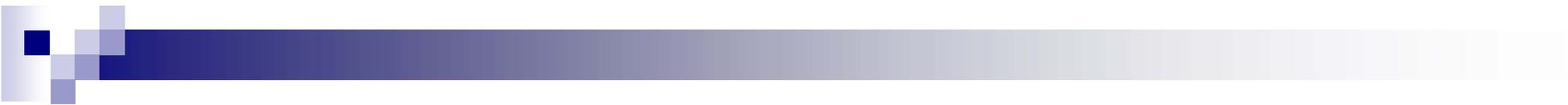
Data Used in the Analysis

- **Respondents must answer Question 6.**

- **Exclusions:**
  - ☐ Nurses near retirement (65+).
  - ☐ Nurses indicating they would retire soon.
  - ☐ Age undetermined.

- **Missing values:**
  - ☐ Used median answer from each question to fill unanswered questions.

- **2,061 valid responses.**

Part I: Exploratory Factor Analysis

- **What is it?**
  - ☐ Statistical technique.
  - ☐ Does two things:
    - Reduces the number of scaled items for analysis.
    - Collapses retained scaled items into **common** themes or "factors."
  - ☐ Allows us to better "get our arms around" the data.

- **Then what?**
  - ☐ Individual questions can be added together to create a composite or factor score.
  - ☐ Use as independent variables in model development (e.g., regression).
  - ☐ Model helps us test relevancy of factors.
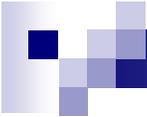
Professional Development

34.	Opportunities for advancement	1	2	3	4	5	NA
43.	Opportunities to use your skills	1	2	3	4	5	NA
44.	Opportunities to learn new skills	1	2	3	4	5	NA
45.	Opportunities for continuing education	1	2	3	4	5	NA

Interpersonal

24.	Skill of RNs where you work	1	2	3	4	5	NA
30.	Level of personal safety at the facility where you work	1	2	3	4	5	NA
31.	Work schedule	1	2	3	4	5	NA
33.	Job security	1	2	3	4	5	NA
35.	Support from nurses with whom you work	1	2	3	4	5	NA
36.	Support from your nursing administration	1	2	3	4	5	NA
37.	Interactions with physicians	1	2	3	4	5	NA
38.	Interactions with other non-nursing staff	1	2	3	4	5	NA
40.	Interaction with patients	1	2	3	4	5	NA
42.	Involvement in policy and management decisions	1	2	3	4	5	NA
46.	Quality of patient care where you work	1	2	3	4	5	NA
47.	Feeling that your work is important	1	2	3	4	5	NA

Compensation

21.	Your current base salary	1	2	3	4	5	NA
22.	Salary range for your position	1	2	3	4	5	NA
23.	Employee benefits	1	2	3	4	5	NA
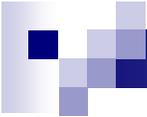
Non-Nursing Tasks

26.	Adequacy of clerical support services	1	2	3	4	5	NA
27.	Non-nursing tasks required of you (e.g., housekeeping, lab)	1	2	3	4	5	NA
28.	Amount of paperwork required	1	2	3	4	5	NA
41.	Time available for patient education	1	2	3	4	5	NA

Local Economic Conditions

71.	Economic opportunities	1	2	3	4	5	DK
73.	Cost of living	1	2	3	4	5	DK
74.	Rural character	1	2	3	4	5	DK
76.	Housing	1	2	3	4	5	DK

Family Proximity

72.	Proximity to family	1	2	3	4	5	DK

Community Services

78.	Parks and recreation/natural amenities	1	2	3	4	5	DK
79.	Education (K-12)	1	2	3	4	5	DK
80.	Access to post-secondary education, including continuing education	1	2	3	4	5	DK
81.	Day care services	1	2	3	4	5	DK
82.	Medical care services	1	2	3	4	5	DK
83.	Mental health services	1	2	3	4	5	DK

Disposable Income

84.	Retail shopping	1	2	3	4	5	DK
85.	Restaurants/entertainment	1	2	3	4	5	DK
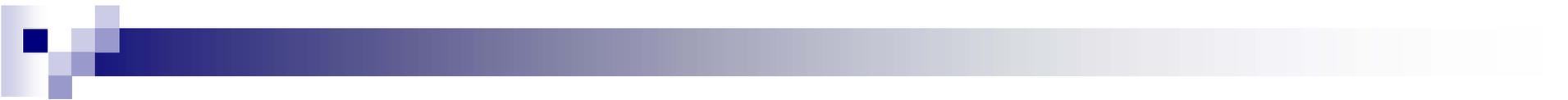
Part II: Binary Logistic Regression

- ## What is it?

  - ☐ Statistical technique.

  - ☐ Used to explain an outcome with two possible answers (e.g., yes/no, pass/fail, leave/stay, etc.).

  - ☐ Provides odds ratios.

    - Increased/decreased risk of an outcome.

  - ☐ Further reduces the number of items to a "core set" which may explain an outcome.
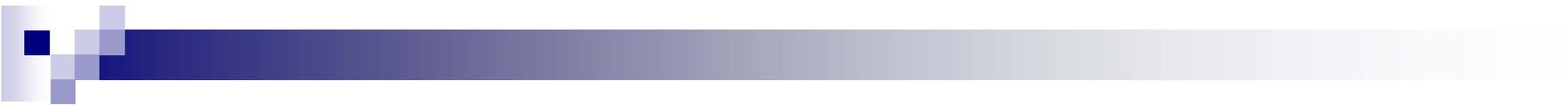
Binary Logistic Regression

- ## How was it used?

  - ☐ Modeled RN responses to Question 6.

    - Do you plan to leave your primary employer in the next 12 months?

  - ☐ Employed trial and error (mostly error) to determine a core set of items.

  - ☐ Checked results:

    - Statistical significance.

    - Reasonable given what we know.

    - Combined modeled outcomes with written comments.
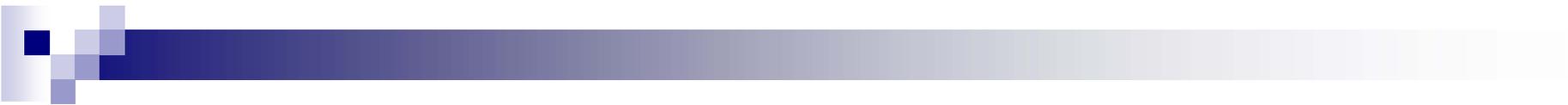
Model Variables

- **Salary** – satisfaction with base salary
  - □ Why not compensation?

- **Respondent Age**

- **Community Ties**

- **Professional Development**

- **Interpersonal Interactions**

- **Opportunities to Move**
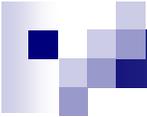
Regression Results

Parameter	Estimate
Intercept	2.8405
SALARY	-0.1432
tied_comm2	-0.2474
prof_dev	-0.1274
move2	0.3409
interpers	-0.0393
age	-0.0308

Odds Ratio Estimates

Effect	Odds Ratio
SALARY	0.867
tied_comm2	0.781
prof_dev	0.880
move2	1.406
interpers	0.961
age	0.970

**Greater Probability of Stated Intent
to Leave Primary Employer in 12 Months**

LEAVE

- Younger
- Lower salary satisfaction
- Lower professional development satisfaction
- Less tied to community
- Lower interpersonal satisfaction
- Greater inclination to move

- Older (pre-retirement)
- Greater salary satisfaction
- Greater professional development satisfaction
- Stronger ties to community
- Greater interpersonal satisfaction
- Less inclined to move

A knowledge of these factors allows us to correctly predict 85.9% of the time the answer to the question, "Do you plan to leave employment with your primary facility within the next 12 months?"

STAY

**Lesser Probability of Stated Intent
to Leave Primary Employer in 12 Months**
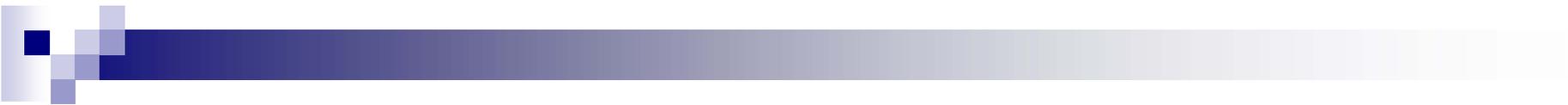
Post-Modeling

- The "so what" test:
  - Practical application.
  - What factors are controllable at different levels:
    - Department
    - Organization
    - Community
    - State

Summary

- Factor analysis showed logical groupings of scaled items.

- Factor groupings then used in a binary logistic regression model to predict intent to leave.

- Model's power increased when we added age, community ties and propensity to move.

- Management action to affect outcomes is limited but can be effective.
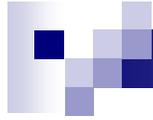
Lunch
11:45-1:00
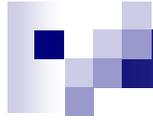
Nurse Flow
Between Industries
## The Cost of Turnover/Matching Worker
Needs and Work Environment
1:00-1:30

# Source of Nurse Hires into Ambulatory Health Care Services, 2004Q4-2006Q3

Pie chart legend:
- Partner State
- Not Working - Nonresident
- Not Working - Retirement
- Not Working - Resident
- Ambulatory Health Care
- Government
- Hospital
- Nursing and Residential Care
- Private Sector

Pie chart values: 6%, 8%, 3%, 1%, 7%, 9%, 30%, 5%, 31%
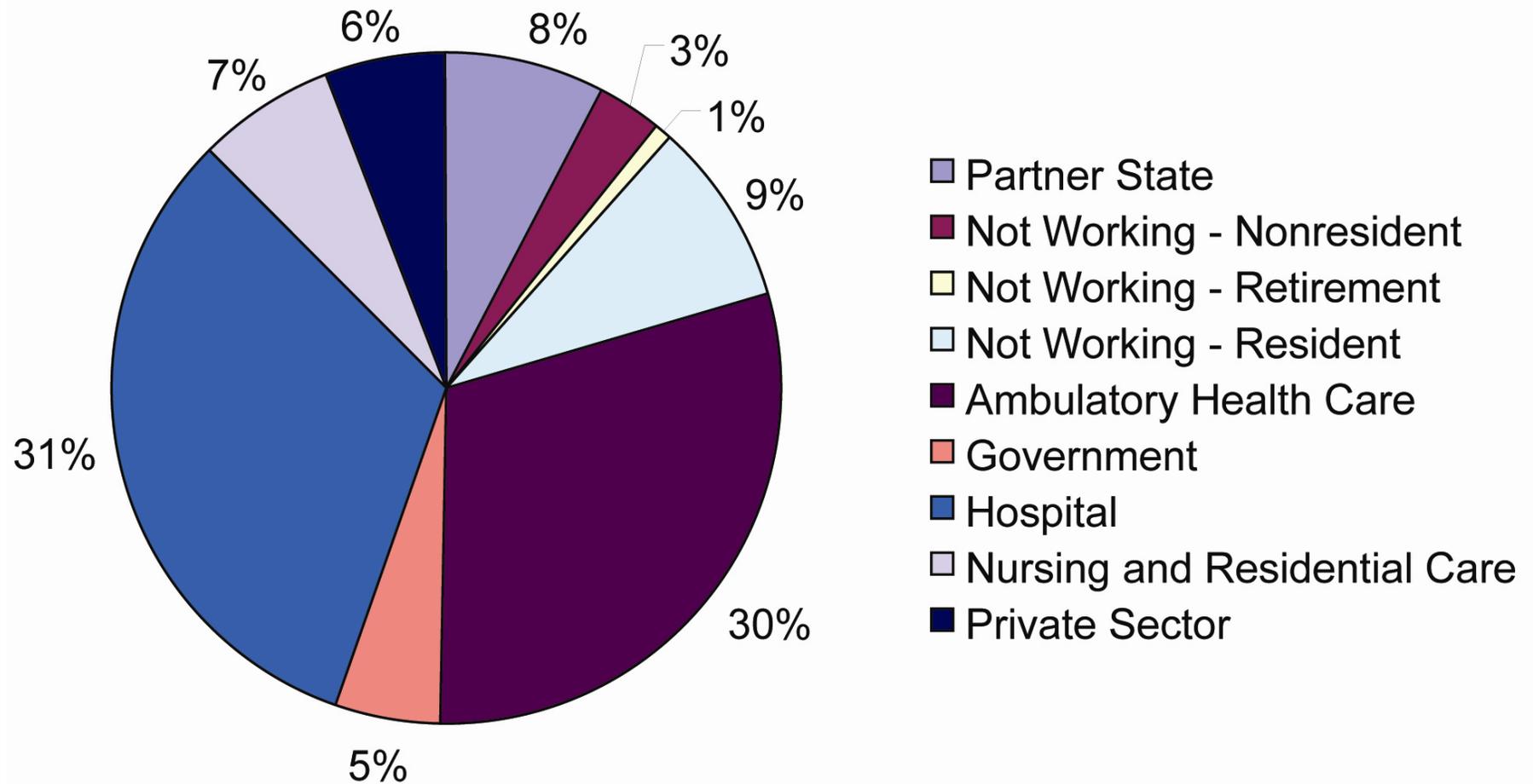
Destination of Nurse Exits from Ambulatory Health Care Services, 2003Q3-2005Q2

Legend:
- Partner State
- Not Working - Nonresident
- Not Working - Retirement
- Not Working - Resident
- Ambulatory Health Care
- Government
- Hospital
- Nursing and Residential Care
- Private Sector
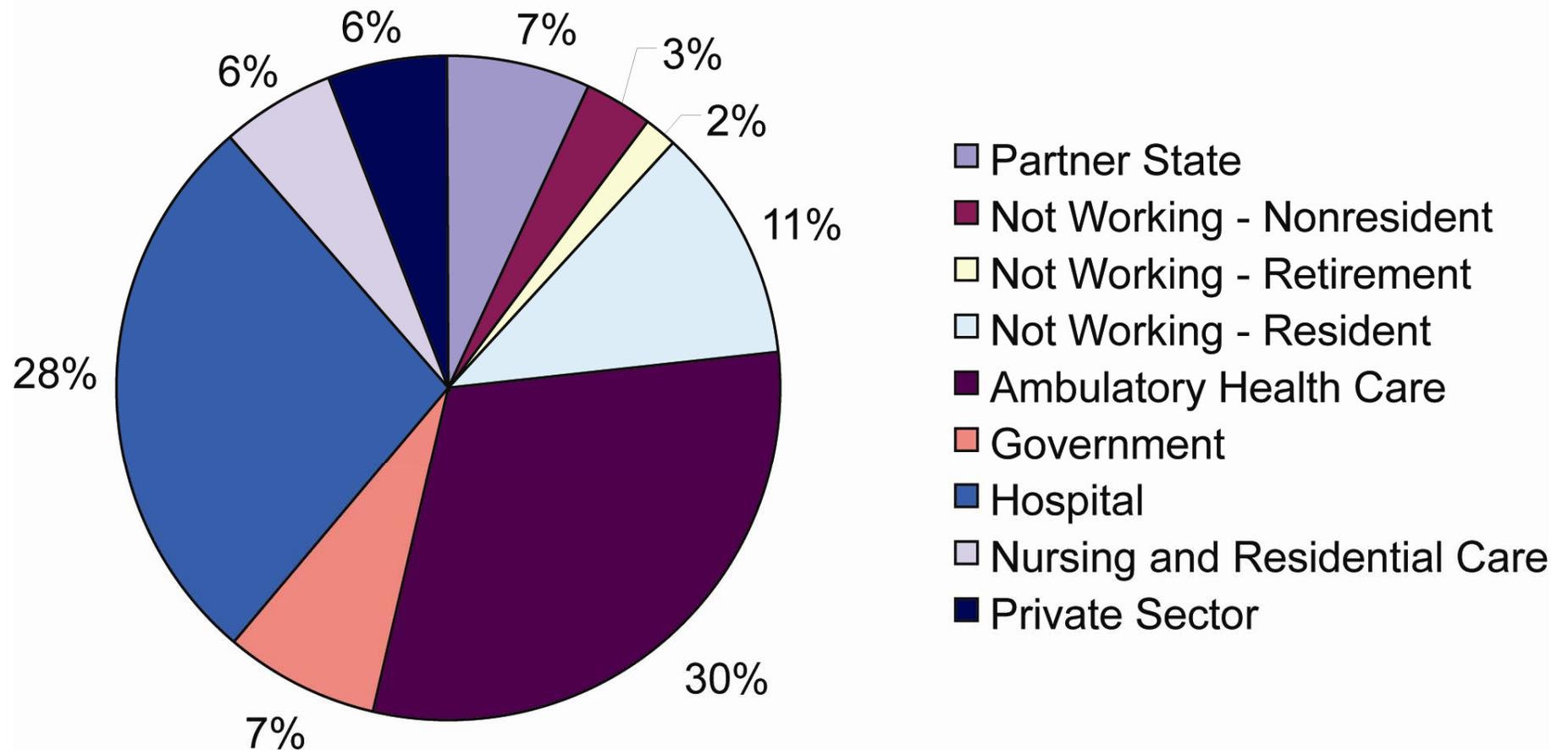
Source of Nurse Hires into Nursing and Residential Care Facilities, 2004Q4-2006Q3

Legend:
- Partner State
- Not Working - Nonresident
- Not Working - Retirement
- Not Working - Resident
- Ambulatory Health Care
- Government
- Hospital
- Nursing and Residential Care
- Private Sector

Percentages shown: 9%, 7%, 5%, 1%, 9%, 10%, 4%, 26%, 29%
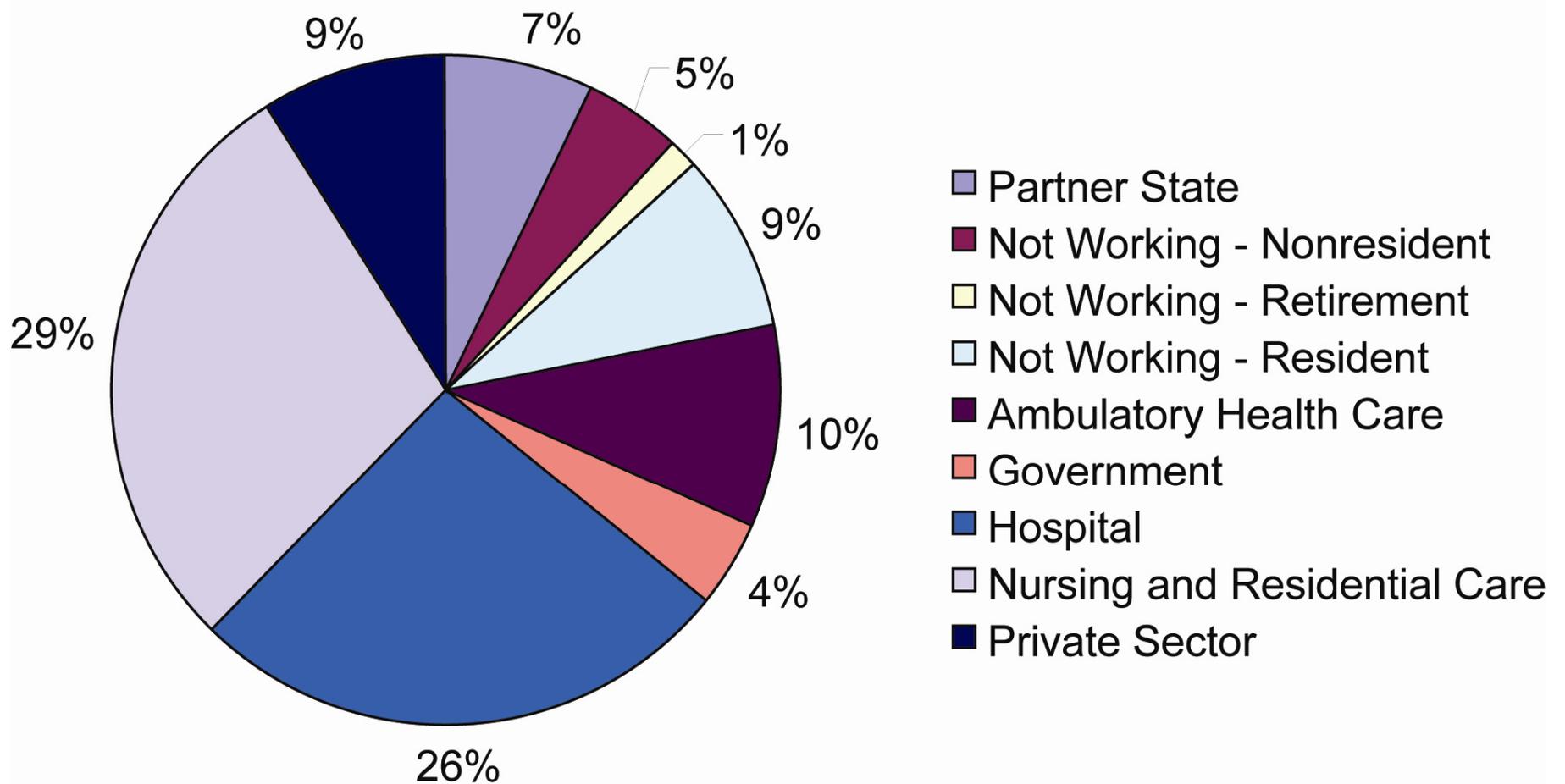
Destination of Nurse Exits from Nursing and Residential Care Facilities, 2003Q3-2005Q2
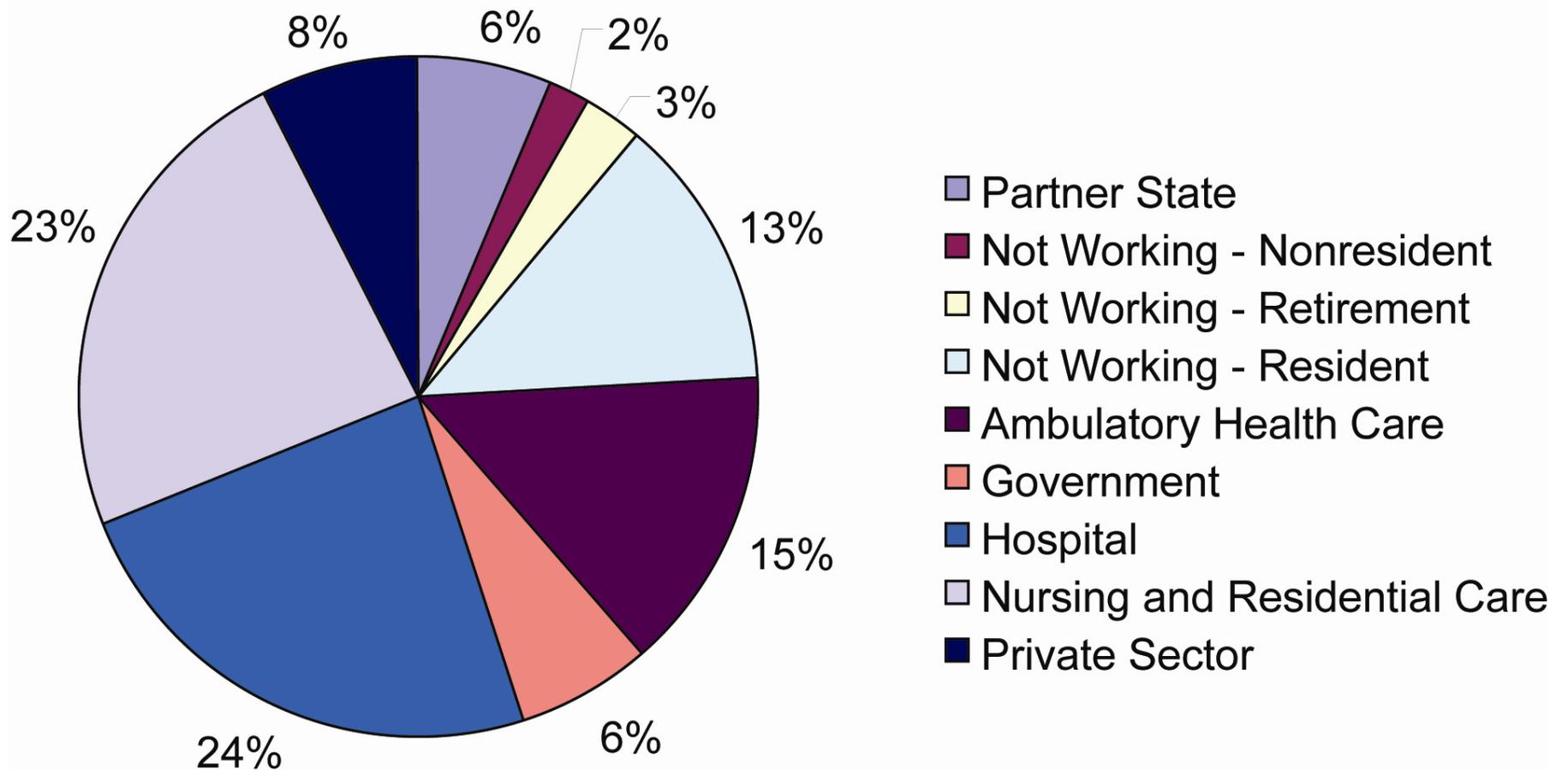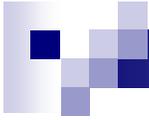
Source of Nurse Hires into Hospitals, 2004Q4-2006Q3

Legend:
- Partner State
- Not Working - Nonresident
- Not Working - Retirement
- Not Working - Resident
- Ambulatory Health Care
- Government
- Hospital
- Nursing and Residential Care
- Private Sector

Percentages shown: 8%, 6%, 15%, 14%, 0%, 16%, 12%, 7%, 22%
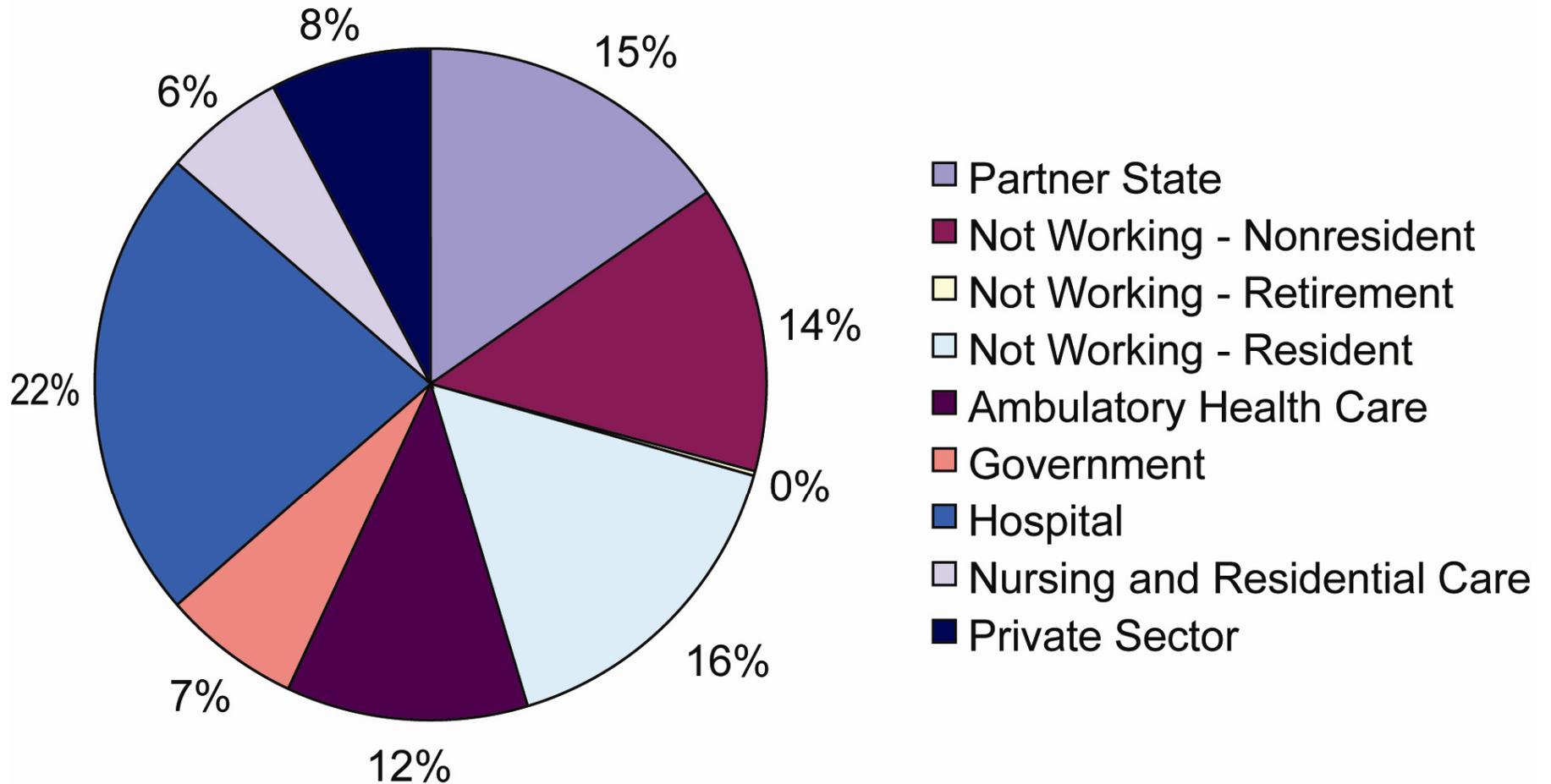
Destination of Nurse Exits from Hospitals, 2003Q3-2005Q2

Legend:
- Partner State — 18%
- Not Working - Nonresident — 4%
- Not Working - Retirement — 3%
- Not Working - Resident — 18%
- Ambulatory Health Care — 17%
- Government — 7%
- Hospital — 20%
- Nursing and Residential Care — 6%
- Private Sector — 7%
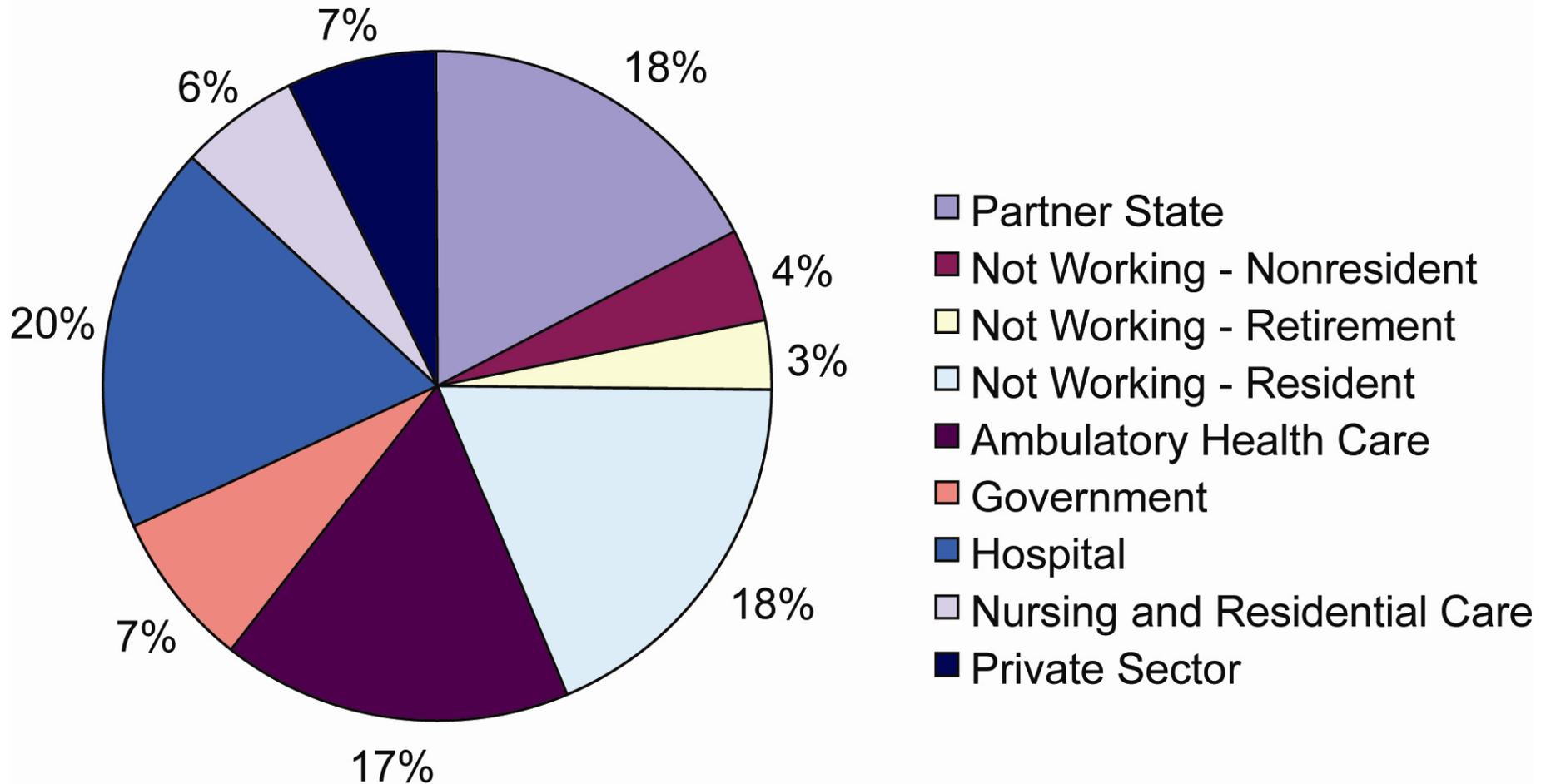
Flow of Nurse Hires in Health Care Subsectors in Wyoming, 2006
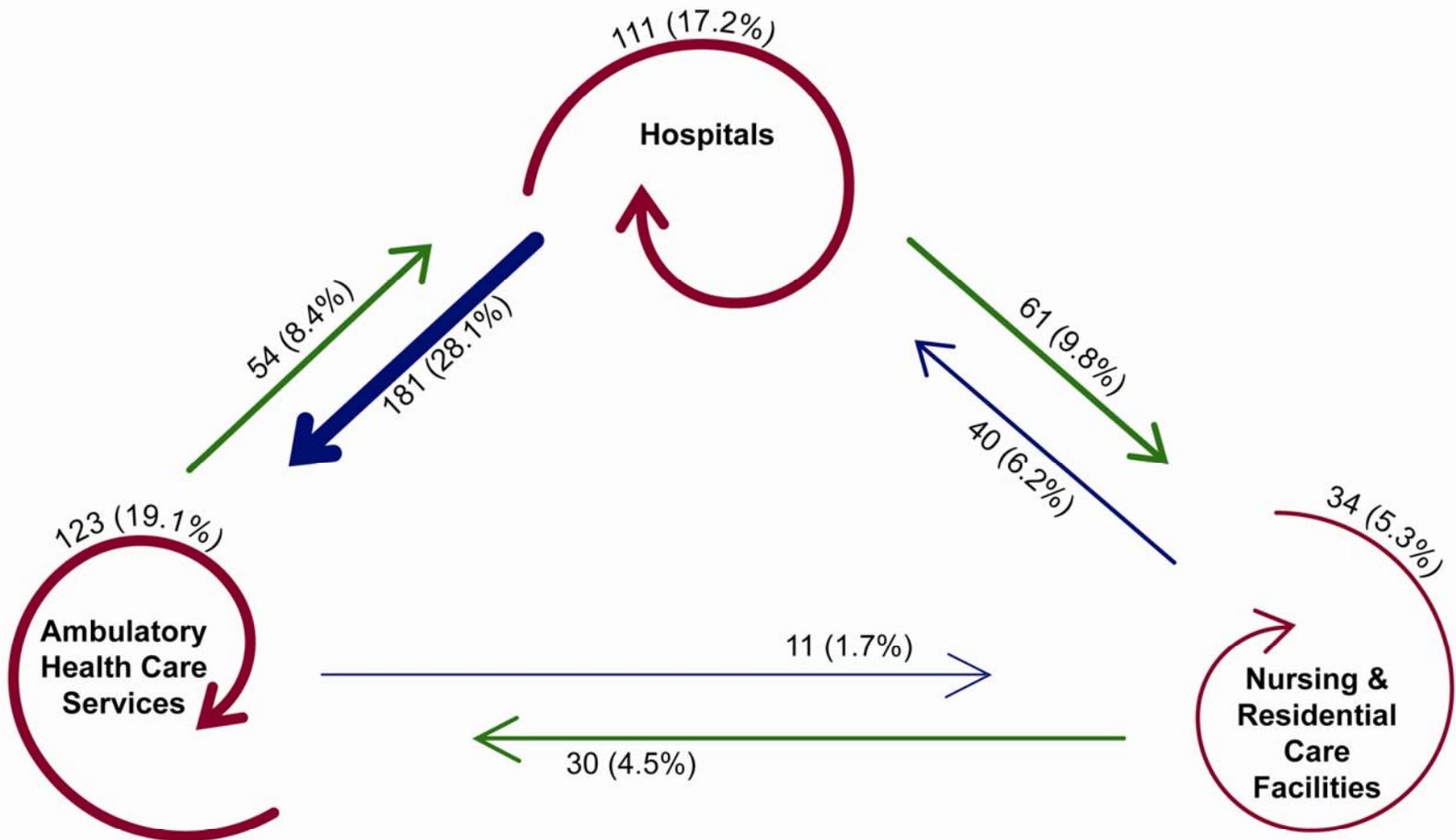
Flow of Nurse Hires Age 34 and Younger in Health Care Subsectors in Wyoming, 2006
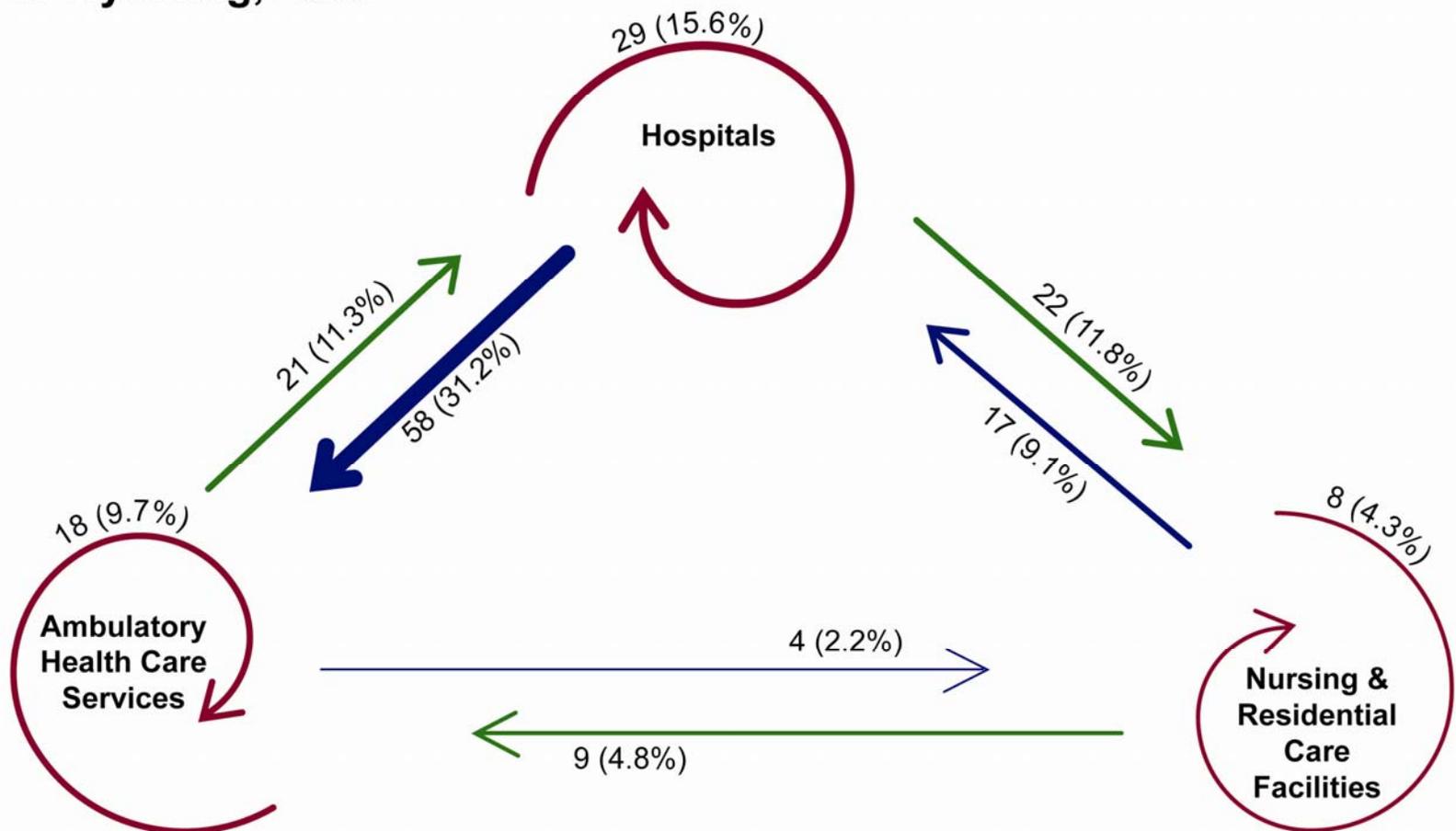
Flow of Nurse Hires Age 35-44 in Health Care Subsectors in Wyoming, 2006
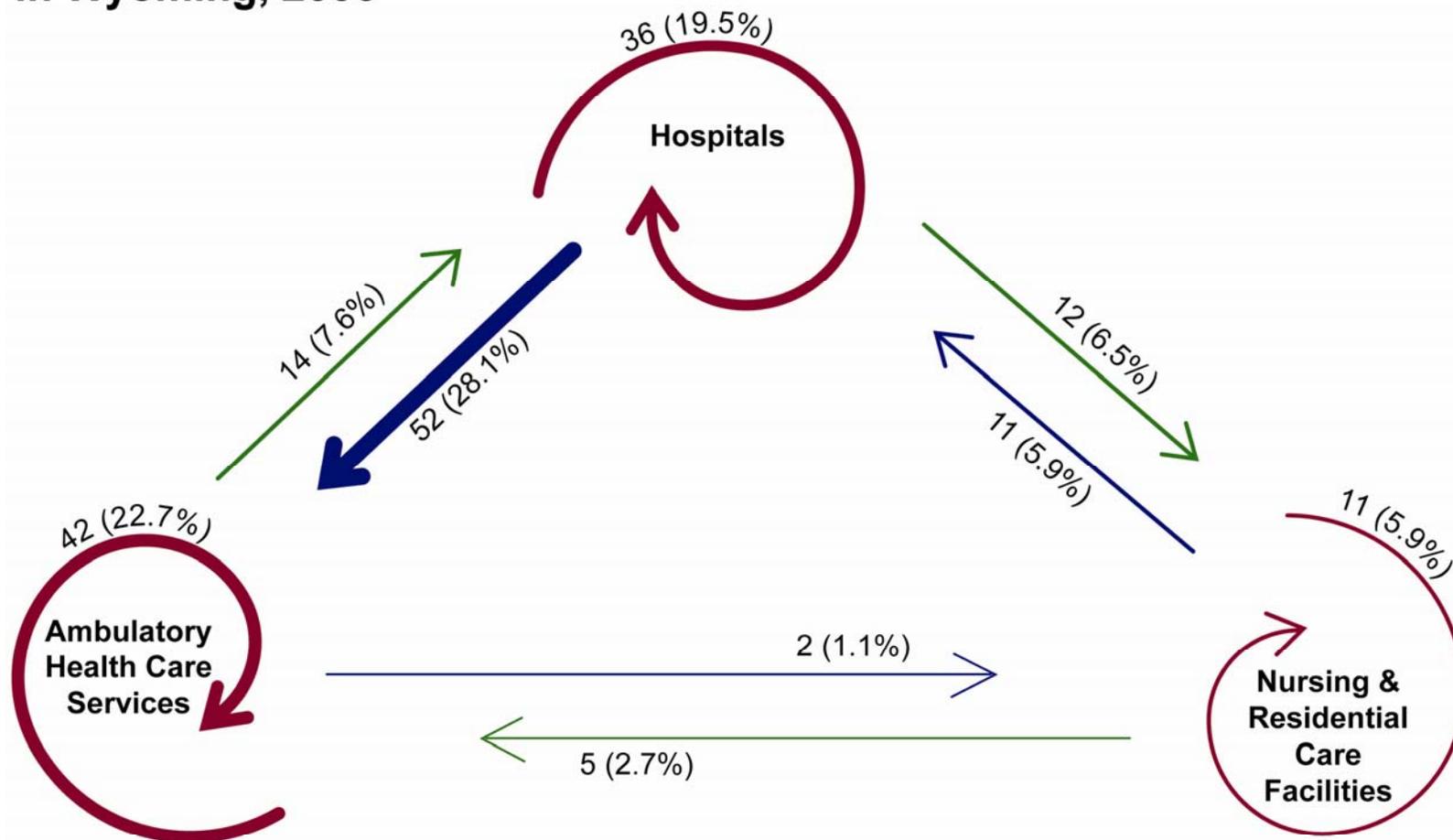
Flow of Nurse Hires Age 45-54 in Health Care Subsectors in Wyoming, 2006
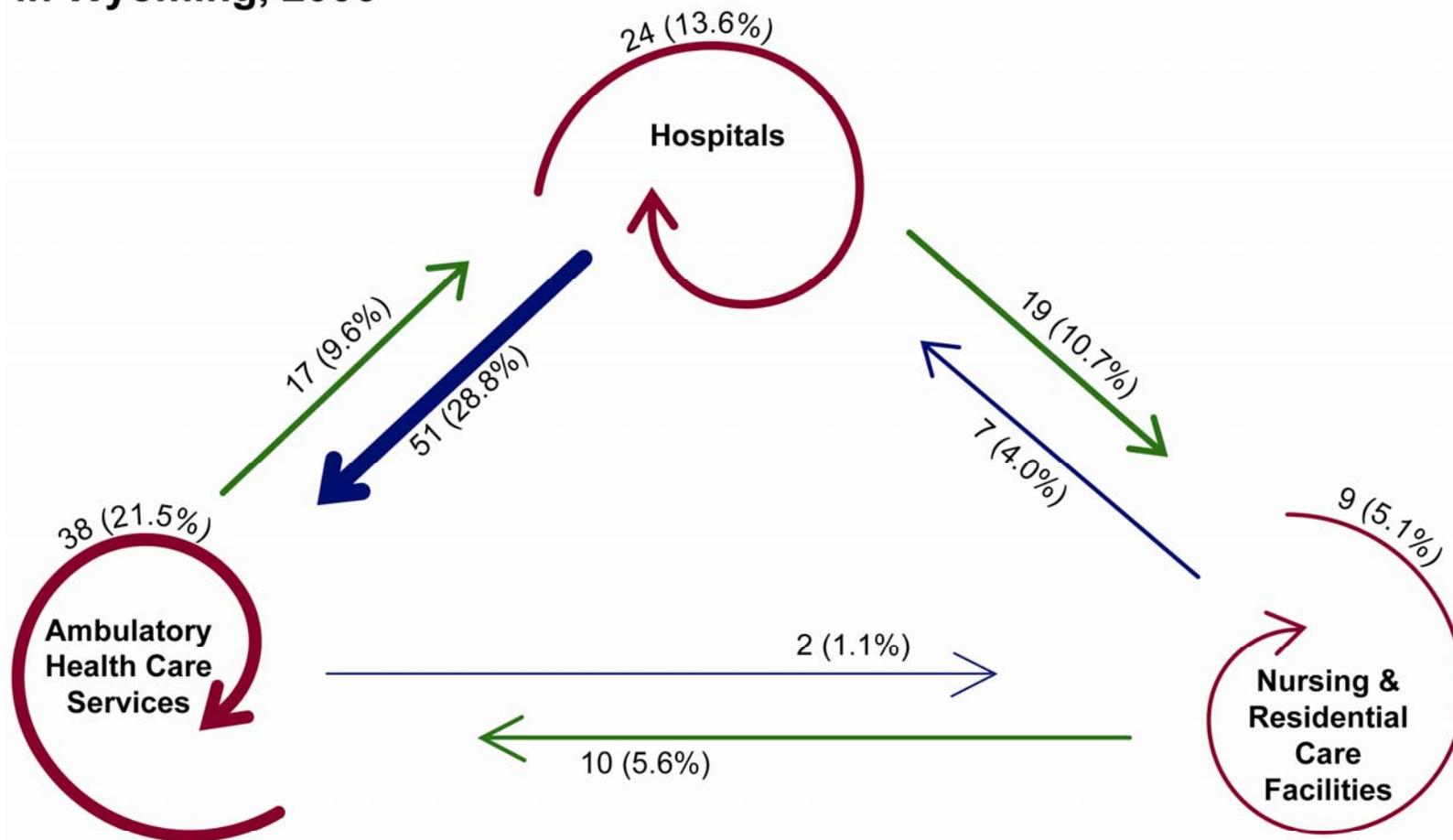
Flow of Nurse Hires Age 55 and Older in Health Care Subsectors in Wyoming, 2006
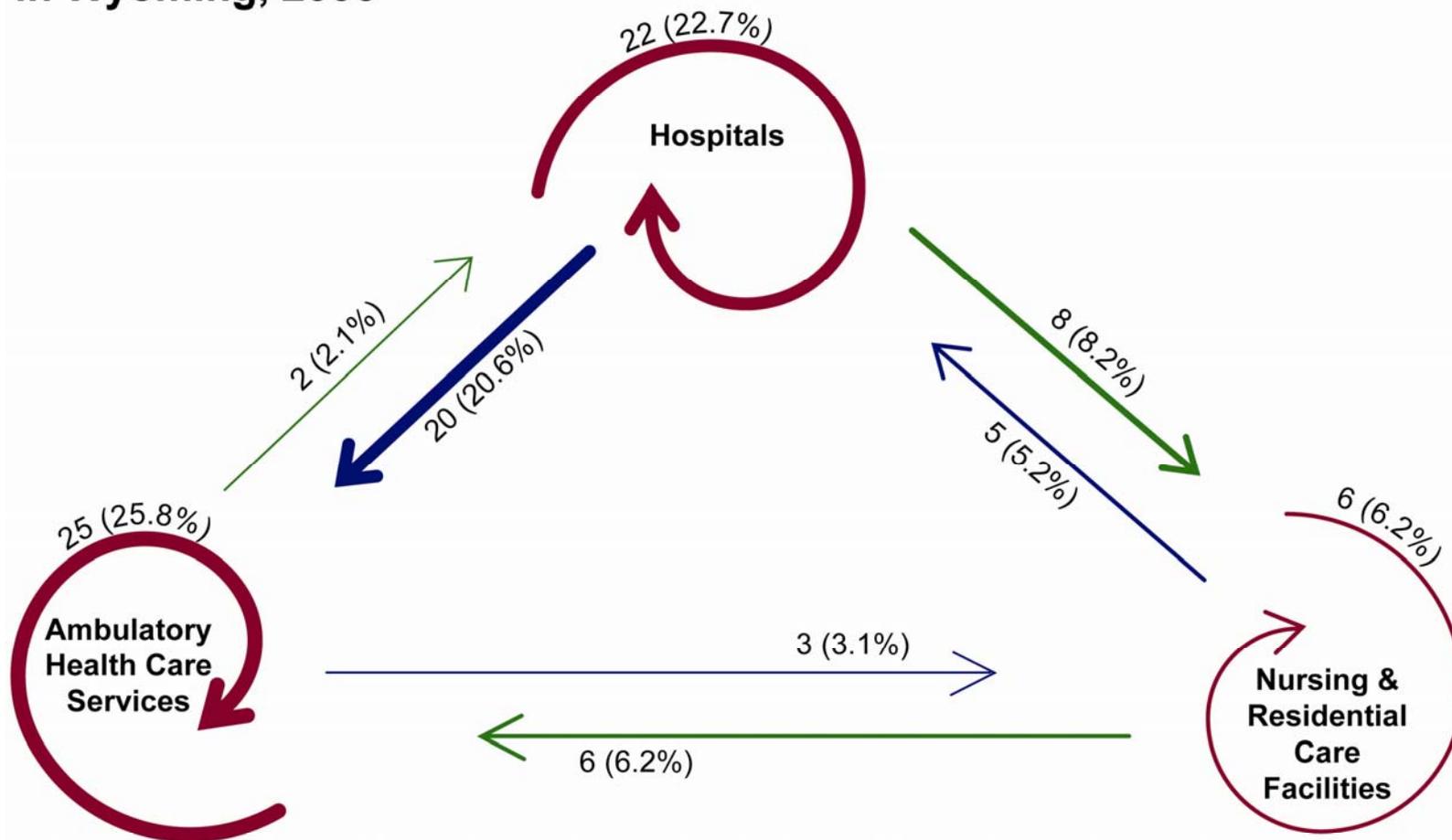
Percentage Change in Average Quarterly Earnings for Health Care Nurse Hires by Industry Subsector Source and Age, 2006

Hires: Ambulatory Health Care Facilities

Subsector Source	<35	35-44	45-54	55+
Ambulatory Care Facilities	22.7%	32.0%	12.5%	-8.5%
Hospitals	-8.0%	-32.5%	-51.8%	NA
Nursing and Residential Care Facilities	NA	NA	-54.0%	NA

Hires: Hospitals

Subsector Source	<35	35-44	45-54	55+
Ambulatory Care Facilities	65.6%	38.7%	9.1%	NA
Hospitals	-8.8%	5.5%	2.8%	-16.0%
Nursing and Residential Care Facilities	70.1%	23.5%	NA	NA

Hires: Nursing and Residential Care Facilities

Subsector Source	<35	35-44	45-54	55+
Ambulatory Care Facilities	NA	NA	NA	NA
Hospitals	-29.0%	-38.7%	-16.5%	NA
Nursing and Residential Care Facilities	NA	-49.7%	NA	NA

Note: Wages restricted to continuous employment transactions. Prior and subsequent quarterly wages were Consumer Price Index (not seasonally adjusted, U.S. city averages, all items) adjusted to 2006 dollars.
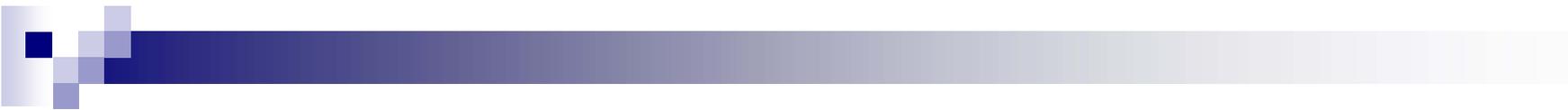
Nurse Flow Between Industries: Summary

- Firms in ambulatory health care services hire nurses primarily from hospitals and other ambulatory health care services firms.

- Firms in nursing & residential care facilities hire nurses primarily from hospitals and other firms in nursing & residential care facilities firms.

- Hospitals hire nurses from a diverse range of sources with other hospitals providing the largest segment.

- Within the three health care subsectors, the dominant path for nurse hires is from hospitals to ambulatory health care services.

- Nurse hires into hospitals from the two other health care subsectors experience an increase in average wages.

- Nurse hires into ambulatory health care and nursing & residential care facilities from hospitals experience a decrease in average wages.
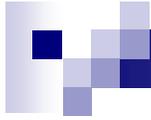
Stocks and Flows of Nurses to and from Wyoming 1:30-2:00

Nurse Entry and Exit: Definitions

- *New Entrant*: worked in Wyoming (or health care) in 2006Q3, but did not work in Wyoming for at least four years prior to 2006Q3.

- *Permanent Exit*: worked in Wyoming in 2006Q3, then was absent for at least the next four consecutive quarters.

- *Labor Market*: all people working jobs in Wyoming covered by state Unemployment Insurance.

- *Health Care*: the combination of ambulatory care, hospitals, and nursing & residential care.

Figure 1: Comparison of Entrants to and Exits from Health Care (4 Quarter Moving Average)

(a) One outlier (2003Q1 New Entrants) was adjusted to the average first quarter value for 1999, 2000, 2001, and 2002

Exits from Health Care (at least one quarter)   Entrants to Health Care (a)

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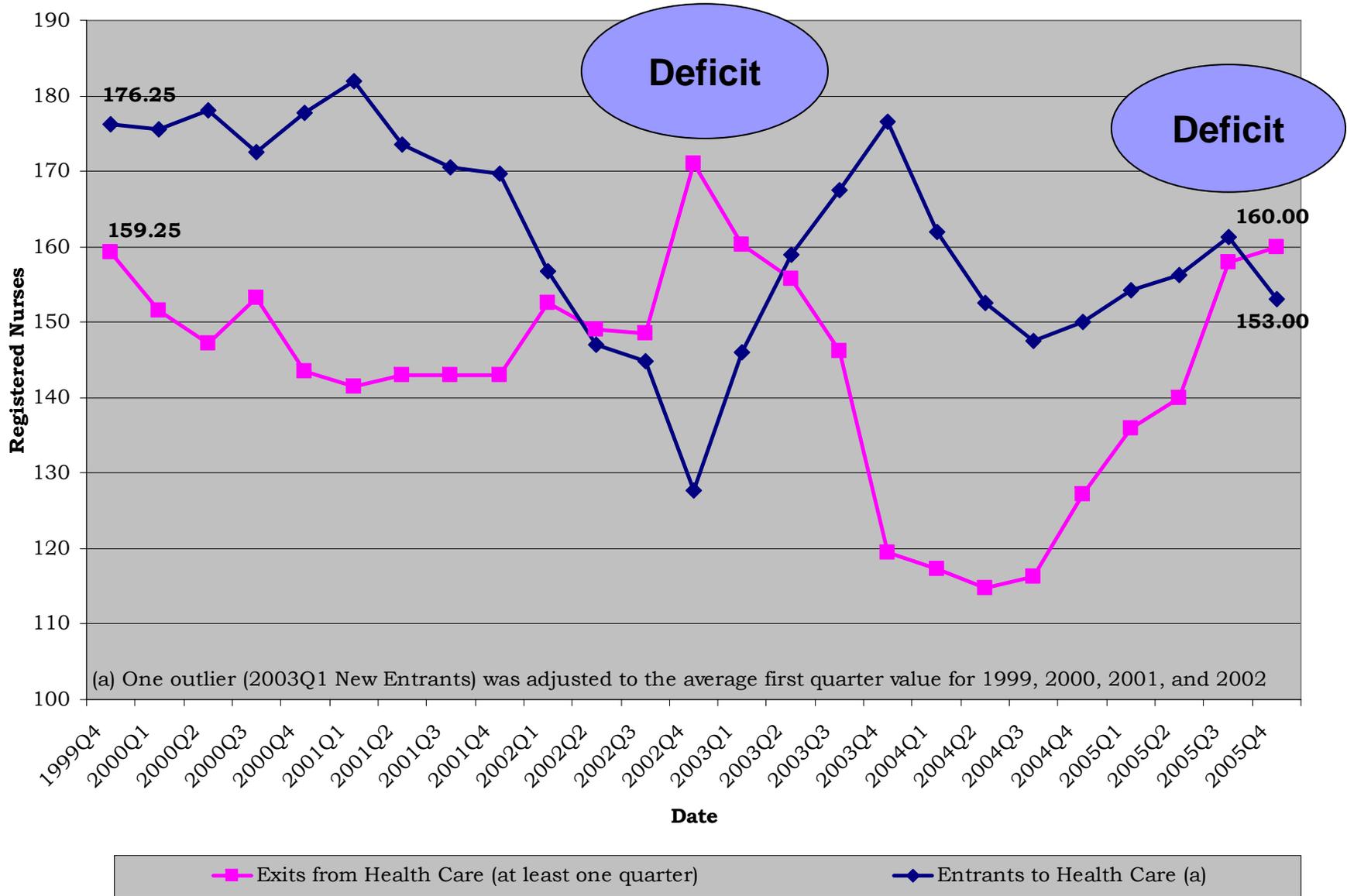
Figure 2: Stock and Flow of Wyoming Registered Nurses (4 Quarter Moving Average)

(a) One outlier (2003Q1) was adjusted to the average first quarter value for 1999, 2000, 2001, and 2002

Legend:
- Exits from Wyoming Labor Market (at least one year)
- Exits from Health Care (at least one quarter)
- New Entrant RNs (first appearance or >4 years) to Health Care (a)
- Re-Entrant RNs (<=4 years) to Health Care
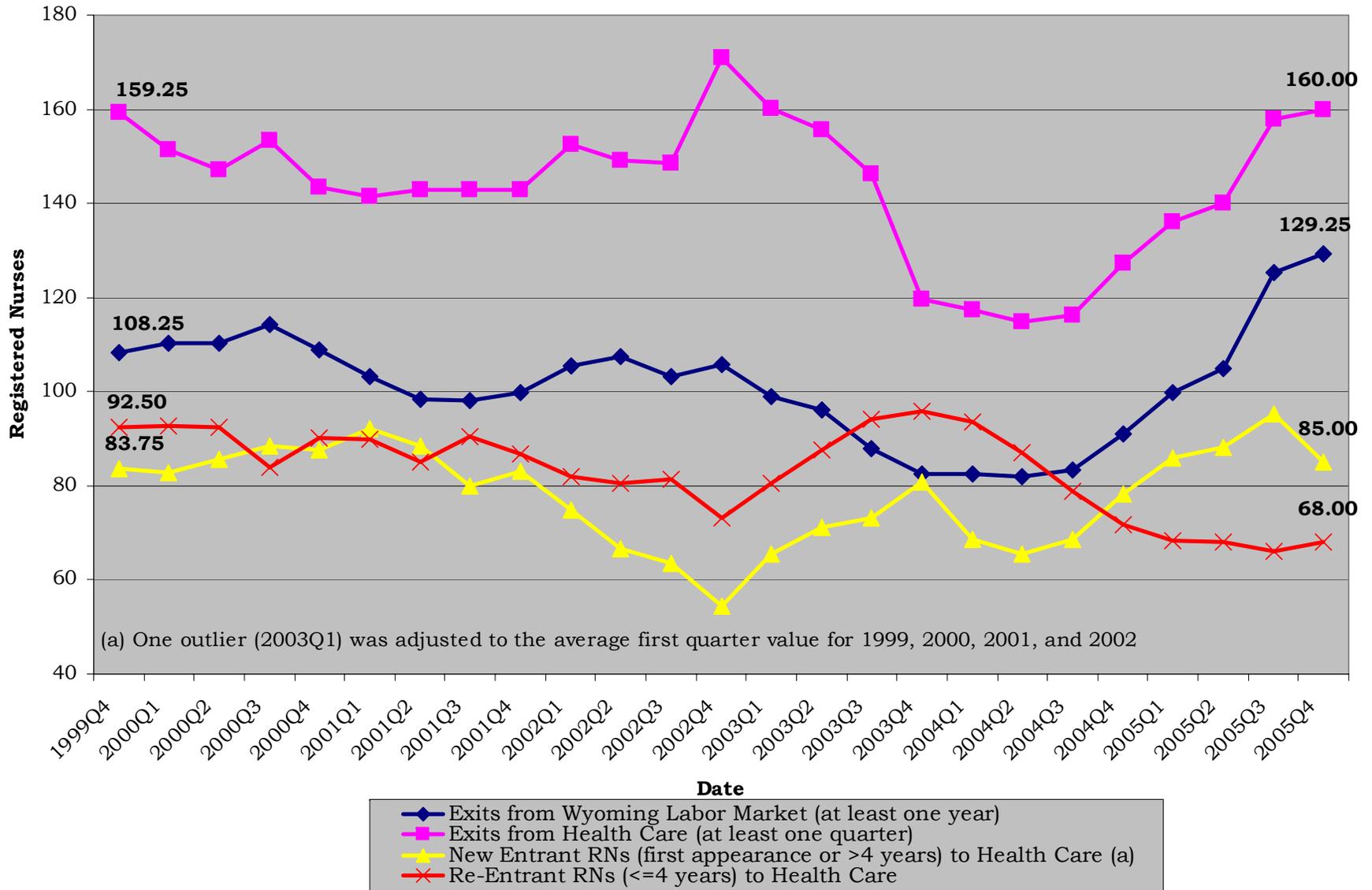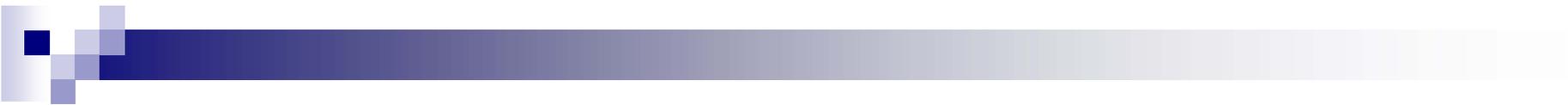
Summary

- Stock and flow of nursing labor contains multiple components.

- Aggregate turnover rates are useful, but only tell part of the story.

- Success of the health care system depends upon retention of nursing talent.
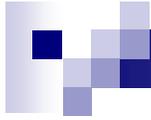
Strategies for Employee Retention and Recruitment

2:00-2:30
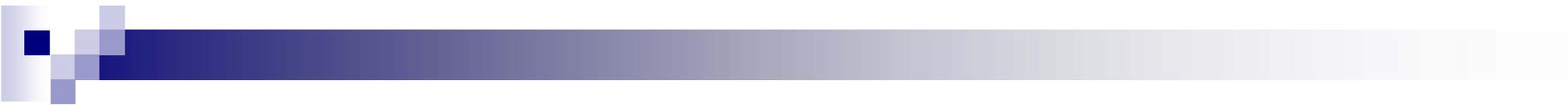
Health Care Vacancy Survey

- Firms were asked about their experiences with various recruitment and retention strategies and to rate their effectiveness.
  - Part of the job vacancy survey for ambulatory care and long-term care firms.
  - Hospital vacancy data was collected via the Internet rather than by mail questionnaire.
- Wyoming firms we collected data from:
  - Ambulatory care firms - examples
    - Family practitioners
    - Dentists
    - Chiropractors
  - Wyoming's 22 hospitals
  - Long-term care firms - examples
    - Nursing care facilities
    - Residential mental health and substance abuse facilities
    - Homes for the elderly
- All hospitals and long-term care facilities were sent questionnaires.
- A sample of ambulatory care firms were sent questionnaires.
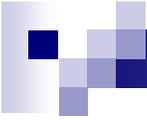
Data Collection Periods

- 30 ambulatory care firms were sent a questionnaire in mid-July 2007 as a pre-test.

- Upon completion of the pre-test, 427 ambulatory care firms were sent questionnaires.

Timeline of Health Care Data Collection by Industry Subsector

Summer 2007	Fall 2007	Early 2008
Ambulatory Health Care Services	Nursing & Residential Care Facilities	Hospitals
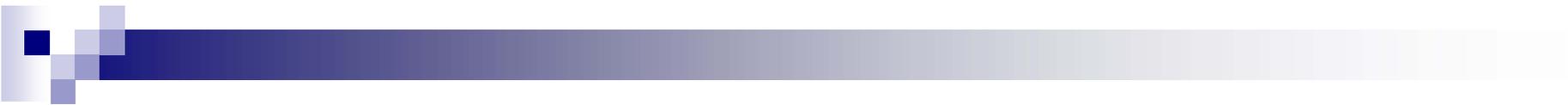
Survey Strategies and Results

- The questionnaire was modified slightly each time a new iteration of it was developed:

  - Ambulatory care strategy usage was asked about for all staff.

  - Long-term care and hospitals were asked about strategy usage for RNs, LPNs/LVNs, and CNAs.

  - Ambulatory care not surveyed about on-the-job training or flexible scheduling as recruitment and retention strategies.

- Weighting of results:

  - Done to ensure that the results were distributed similarly to the firms.

  - Ambulatory care weighted by employment as indicated in the Unemployment Insurance records.

  - Hospitals and long-term care were weighted by each industries' ratio of respondents' total employment to industry total employment.

- Data for miscellaneous residential care firms within long-term care were excluded because the vast majority reported that they do not employ health care workers.

Questionnaire and Results

HOSPITALS AND LONG-TERM CARE RECRUITMENT AND RETENTION QUESTIONS

For questions 2 through 4, please indicate if the strategies are used for nurses' recruitment, retention, or both. If the strategy is used, please rate its effectiveness, where 1 = not at all effective and 5 = very effective.

		How is the incentive used?				Effectiveness over the past 6 months					
		Not used	Recruitment	Retention	Don't know	Not at all effective				Very effective	Don't Know
a.	Sign-on bonus					1	2	3	4	5	DK
b.	On-site day care/sick care programs					1	2	3	4	5	DK
c.	Loan forgiveness					1	2	3	4	5	DK
d.	Health benefits					1	2	3	4	5	DK
e.	Retirement plan					1	2	3	4	5	DK
f.	Tuition reimbursement					1	2	3	4	5	DK
g.	Flexible scheduling					1	2	3	4	5	DK
h.	On-the-job training					1	2	3	4	5	DK

Table 1: Wyoming Health Care Industries' Use and Employer Opinion of Effectiveness[a] of Employee Recruitment and Retention Strategies[b], Weighted
Average Effectiveness Scores Scale: 1 = Not at all effective 5 = Very effective

Recruitment/ Retention Strategy	AMBULATORY CARE All Staff	HOSPITALS Registered Nurses	Licensed Practical/ Vocational Nurses	Certified Nursing Assistants	LONG-TERM CARE Registered Nurses	Licensed Practical/ Vocational Nurses	Certified Nursing Assistants
On-Site Day Care/ Sick Care Programs	Avg. Effectiveness Score: 3.3	Avg. Effectiveness Score: 3.3	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 3.3	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 4.0
Usage	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	98.0%	75.0%	78.6%	75.0%	95.1%	96.4%	98.3%
Used	2.0%	25.1%	21.4%	25.0%	4.9%	3.6%	1.7%
Health Benefits	Avg. Effectiveness Score: 3.9	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.6	Avg. Effectiveness Score: 3.0
Usage	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	52.2%	0.0%	0.0%	0.0%	50.0%	54.4%	50.8%
Used	47.8%	100.0%	100.0%	100.0%	50.0%	45.6%	49.1%
Loan Forgiveness	Avg. Effectiveness Score: 3.3	Avg. Effectiveness Score: 4.2	Avg. Effectiveness Score: 4.0	Avg. Effectiveness Score: 2.0	Avg. Effectiveness Score: 3.3	Avg. Effectiveness Score: 3.5	Avg. Effectiveness Score: 3.0
Usage	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	98.5%	68.8%	78.6%	93.8%	95.1%	96.4%	96.7%
Used	1.5%	31.3%	21.4%	6.3%	4.9%	3.6%	3.3%
Retirement Plan	Avg. Effectiveness Score: 3.8	Avg. Effectiveness Score: 3.5	Avg. Effectiveness Score: 3.5	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 2.7
Usage	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	57.7%	6.3%	7.1%	6.3%	57.4%	59.6%	60.0%
Used	42.3%	93.8%	92.9%	93.8%	42.6%	40.3%	40.0%
Sign-On Bonus	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 2.2	Avg. Effectiveness Score: 2.7	Avg. Effectiveness Score: 2.6
Usage	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	94.9%	43.8%	85.7%	87.5%	82.0%	82.1%	81.7%
Used	5.1%	56.3%	14.2%	12.5%	18.0%	17.8%	18.3%
Tuition Reimbursement	Avg. Effectiveness Score: 3.3	Avg. Effectiveness Score: 3.7	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.1	Avg. Effectiveness Score: 3.1	Avg. Effectiveness Score: 3.2
Usage	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	92.6%	12.5%	28.6%	18.8%	85.0%	83.6%	79.7%
Used	7.4%	87.5%	71.4%	81.3%	15.0%	16.3%	20.3%
On-the-Job Training	Avg. Effectiveness Score:	Avg. Effectiveness Score: 3.7	Avg. Effectiveness Score: 3.7	Avg. Effectiveness Score: 3.8	Avg. Effectiveness Score: 2.9	Avg. Effectiveness Score: 2.7	Avg. Effectiveness Score: 2.9
Usage	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	Not Surveyed About This Strategy	18.8%	28.6%	25.0%	72.1%	71.9%	61.7%
Used		81.3%	71.4%	75.0%	27.9%	28.1%	38.3%
Flexible Scheduling	Avg. Effectiveness Score:	Avg. Effectiveness Score: 3.5	Avg. Effectiveness Score: 3.6	Avg. Effectiveness Score: 3.6	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.3
Usage	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	Not Surveyed About This Strategy	14.3%	28.6%	14.3%	60.0%	61.8%	61.0%
Used		85.7%	71.4%	85.6%	40.0%	38.2%	39.0%

[a]Percentages may not sum to 100% due to rounding. Average effectiveness scores exclude firms that reported that they did not know if the strategy was used, but reported on the effectiveness of the strategy.
[b]Data for Ambulatory Care collected summer 2007; Hospitals collected in early 2008; Long-Term Care in fall 2007.
Prepared May 12, 2008, by S. Saulcy, Senior Economist, Wyoming Department of Employment, Research & Planning.

Table 2: Wyoming Health Care Industries' Use and Employer Opinions of Effectiveness[a] of Employee Recruitment and Retention Strategies[b], by Intended Use, Weighted

Average Effectiveness Scores Scale: 1 = Not at all effective 5 = Very effective

Recruitment/Retention Strategy	AMBULATORY CARE	HOSPITALS			LONG-TERM CARE		
	All Staff	Registered Nurses	Licensed Practical/ Vocational Nurses	Certified Nursing Assistants	Registered Nurses	Licensed Practical/ Vocational Nurses	Certified Nursing Assistants
Health Benefits	Avg. Effectiveness Score: 3.9	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.6	Avg. Effectiveness Score: 3.0
How Is Incentive Used?	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	52.2%	0.0%	0.0%	0.0%	50.0%	54.4%	50.8%
Recruitment	7.7%	0.0%	0.0%	0.0%	11.7%	7.0%	10.2%
Retention	15.4%	6.3%	0.0%	6.3%	10.0%	10.5%	10.2%
Both Recruitment & Retention	24.7%	93.8%	100.0%	93.8%	28.3%	28.1%	28.8%
Retirement Plan	Avg. Effectiveness Score: 3.8	Avg. Effectiveness Score: 3.5	Avg. Effectiveness Score: 3.5	Avg. Effectiveness Score: 3.4	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 3.0	Avg. Effectiveness Score: 2.7
How Is Incentive Used?	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms	% of Firms
Not Used	57.7%	6.3%	7.1%	6.3%	57.4%	59.6%	60.0%
Recruitment	3.3%	0.0%	0.0%	0.0%	8.2%	5.3%	6.7%
Retention	20.3%	6.3%	0.0%	6.3%	8.2%	8.8%	8.3%
Both Recruitment & Retention	18.7%	87.5%	92.9%	87.5%	26.2%	26.3%	25.0%

[a]Percentages may not sum to 100% due to rounding. Average effectiveness scores exclude firms that reported that they did not know if the strategy was used, but reported on the effectiveness of the strategy.

[b]Data for Ambulatory Care collected summer 2007; Hospitals collected in early 2008; Long-Term Care in fall 2007.

Prepared May 12, 2008, by S. Saulcy, Senior Economist, Wyoming Department of Employment, Research & Planning.

Questions or Comments?

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