



A Comparison of Health Care Use for Physician-Referred and Self-Referred Episodes of Outpatient Physical Therapy

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+ Objectives

Upon completion of this educational activity, participants will be able to:

- Define the importance of health services research
- Describe the significant differences between physician-referred and self-referred episodes of physical therapy services
- Distinguish between cost-effectiveness and resource-use of health services
- Identify relevant health services research topics

+ Outline

- Background
- Overview of research questions
- Data analysis
- Results
- Conclusions
- Future research

+ Study

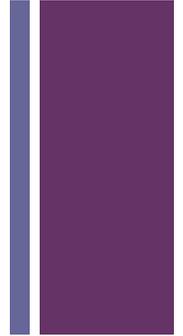
History and Background

- 2001-2003: Initial discussion of research questions
- Collaboration: Agreement between University of Iowa and Wellmark, Inc.
- IRB-approved data repository: Development, access, and use by researchers
- Claims-based approach
- Operational definitions and assumptions

+ Overview

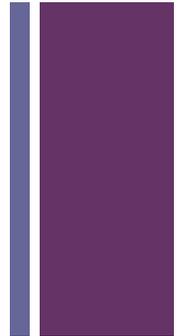
Research questions and considerations

- Compare patient profiles and health care use for physician-referred and self-referred episodes of PT on large, non-Medicare population
- Control for co-morbidities/persistence of health care use during the previous year
- Examine PT-use during the PT-episode of care and all related health care use at three separate time frames
 - 30 days prior to PT-episode
 - During PT-episode
 - 60 days following PT-episode



Data Analysis and Findings

- **Claims-based approach to defining referral status.**
 - 62,707 PT episodes, 28% self-referred; 72% physician-referred.
- **Demographic and clinical similarities between two groups overall:**
 - Greater proportion of PT episodes for women (59% vs 41%), but same gender mix in both referral groups.
 - Average age was lower in the self-referral group (43.5 vs 45.9 years)
 - Very similar with respect to ambulatory case-mix/comorbidities and types of conditions requiring physical therapy.



■ Clinical comparison of referral groups overall:

- Similar with respect to ambulatory case-mix/comorbidities and types of conditions requiring physical therapy.
 - 90% of episodes in both groups were for musculoskeletal conditions (arthritis, spine, sprain/strain).
 - Physician-referred had a higher proportion of arthritis cases (48.1% vs. 44.8%).
 - Self-referred group had a higher proportion of spine and sprain/strain cases (10.2% vs. 8.6%).
- **Unadjusted health care use greater in physician-referred group, but perhaps appropriately so.**

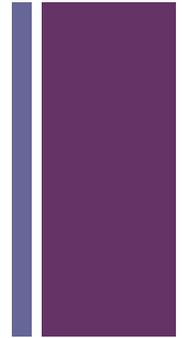
+ Unadjusted Results

	Physician-referred	Self-referred
Average age	45.9	43.5
Average visits/episode	7.0	5.9
Allowable amount/episode	\$420.00	\$347.00
Allowable amount/60 days after	\$65.00	\$62.00
Related non-PT claims during PT Episode	56.3%	43.0%
Saw a qualifying referral physician during PT episode	49.4%	45.6%



- Comparison of referral groups, controlling for case-mix (ACG), age, gender, diagnosis group, and calendar year.
- PT-use and cost of episode less in self-referred group compared to physician-referred group during PT episode.
 - After adjusting for patient characteristics, the self-referred group had
 - fewer PT visits (80%-90%) and associated lower \$
 - lower allowable amounts for related, non-PT claims.





Summary of Key Points

- Results similar to previous studies; differences may be due to controlling for case-mix.
- During episode of PT care, health care use was lower in the self-referred groups for both PT and related non-PT claims, after adjusting for patient characteristics.
 - Overall, 86% as many PT visits; 87% of the (log) allowable amounts for PT claims.
 - Allowable amounts for related, non-PT health care use was lower in the self-referred group (e.g., \$18 less for women and \$44 less for men).

+ Discussion

- Role of physician as gatekeeper may be overstated
- Both PT and related non-PT claims/episode were less in self-referred vs. physician-referred group
- Future research: Gender differences, surgical v. non-surgical services, provider differences

+ Citation

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+ References

- Agency for Healthcare Research and Quality (AHRQ). 2009a. “Clinical Classifications Software (CCS) for ICD-9-CM” [accessed on February 25, 2010]. Available at <http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp.5>
- Freburger, J. K., G. M. Holmes, and T. S. Carey. 2003. “Physician Referrals to Physical Therapy for the Treatment of Musculoskeletal Conditions.” *Archives of Physical Medicine and Rehabilitation* 84 (12): 1839–49.
- The Johns Hopkins Bloomberg School of Public Health. 2008. The Johns Hopkins ACG© System, Version 8.2, December 2008. Baltimore, MD. Available at <http://acg.jhsph.edu>.
- Leemrijse, C. J., I. C. S. Swinkels, and C. Veenhof. 2008. “Direct Access to Physical Therapy in the Netherlands: Results from the First Year in Community-Based Physical Therapy.” *Physical Therapy* 88 (8): 936–46.

+ References

- Martin, B. I., R. A. Deyo, S. K. Mirza, J. A. Turner, B. A. Comstock, W. Hollingworth, and S. D. Sullivan. 2008. “Expenditures and Health Status among Adults with Back and Neck Problems.” *Journal of the American Medical Association* 299 (6): 656–64.
- Mitchell, J. M., and G. de Lissovoy. 1997. “A Comparison of Resource Use and Cost in Direct Access Versus Physician Referral Episodes of Physical Therapy.” *Physical Therapy* 77 (1): 10–8.
- Miller, R. H., and H. S. Luft. 2002. “HMO Plan Performance Update: An Analysis of the Literature, 1997-2001.” *Health Affairs* 21 (4): 63–86.
- Overman, S. S., J.W. Larson, D. A. Dickstein, and P. H. Rockey. 1988. “Physical Therapy Care for Low Back Pain. Monitored Program of First-Contact Non-physician Care.” *Physical Therapy* 68 (2): 199–207.



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