

Outcomes of Pulmonary Embolism in a Tertiary Setting

Nicole Stansbury

James K. Wu MD

Lehigh Valley Health Network, james.wu@lvhn.org

Follow this and additional works at: <https://scholarlyworks.lvhn.org/research-scholars-posters>

Published In/Presented At

Stansbury, N., Wu, J., (2017, July, 31) *Outcomes of Pulmonary Embolism in a Tertiary Setting*. Poster presented at LVHN Research Scholar Program Poster Session, Lehigh Valley Health Network, Allentown, PA.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact LibraryServices@lvhn.org.

Outcomes of Pulmonary Embolism in a Tertiary Setting

Nicole Stansbury, James Wu, M.D.

Division of Cardiothoracic Surgery

Lehigh Valley Health Network, Allentown, Pennsylvania

BACKGROUND

- Pulmonary embolism is a condition in which clots form within the lungs and block the flow of blood. It affects 1 in 1000 people every year and while most cases are small, significant cases can lead to fatal outcomes.
- Lehigh Valley Health Network is a tertiary hospital setting, meaning it provides specialized care after referral from primary or secondary care providers. Tertiary hospitals encounter a large number of patients and therefore encounter a large number of pulmonary embolism cases.



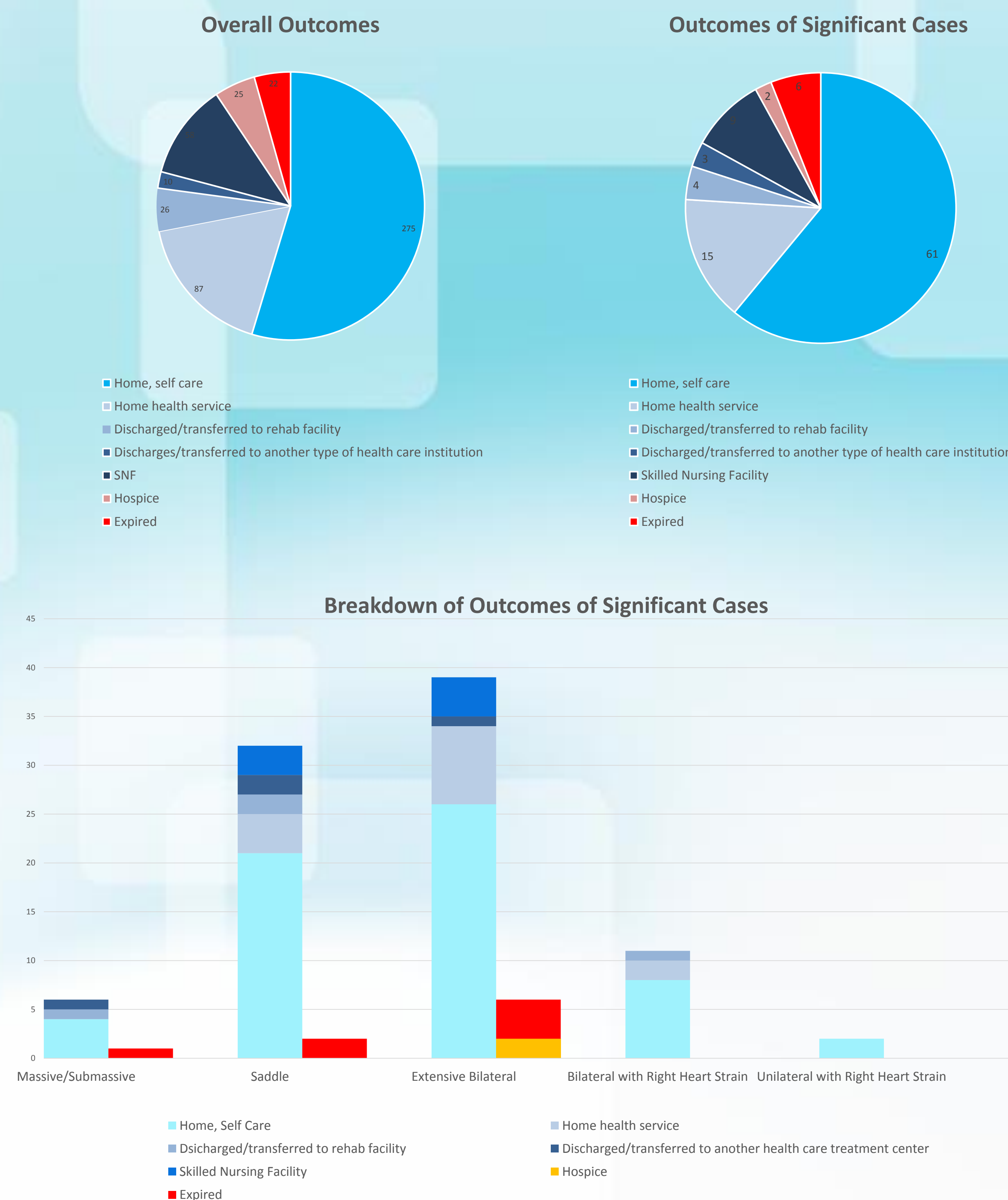
OBJECTIVE

This study seeks to determine the overall outcomes of pulmonary embolism patients at Lehigh Valley Health Network and compare them to the outcomes of significant cases.

METHODS

Pulmonary embolism patients were analyzed from the in-house database for the July 2015-June 2016 year at Lehigh Valley Health Network. These patients were evaluated for significance of PE by their CT scans and their outcomes were analyzed. For this study, significant cases included massive/submassive PE, saddle PE, extensive bilateral PE, bilateral with right heart strain and unilateral with right heart strain. The etiology of expired cases were assessed as well to determine if the cause of death was related to PE.

OUTCOMES



RESULTS

Over the one year period, LVHN encountered 504 cases of pulmonary embolism. Of these patients, 90.7% were discharged to survival (275 discharged to home with self care, 87 discharged to home with health services, 26 discharged to rehab, 10 discharged to other health care institutions and 58 discharged to skilled nursing facilities) and 9.3% experienced poor outcomes (25 transferred to hospice and 22 expired). Of the cases with poor outcomes, 12 were determined to be directly related to the PE. Other causes of death included various types of cancer, multi-system organ failure, end stage renal disease, stroke, and bowel perforation. In this study period, 100 cases were considered to be significant. Of these patients, 92% discharged to survival (61 discharged to home with self care, 15 discharged to home with health services, 4 discharged to rehab, 3 discharged to other health care institutions and 9 to skilled nursing facilities) and 8% experienced poor outcomes (6 transferred to hospice and 2 expired).

CONCLUSIONS

In comparing the survival outcomes for significant and nonsignificant pulmonary embolism, no statistical significance can be seen. While size and significance of pulmonary embolisms can vary drastically, the overall outcomes are similar. This can be considered when deciding a course of treatment for patients. Patients with larger pulmonary embolisms may not need to be treated more aggressively compared to the patients with smaller pulmonary embolism.

REFERENCES

- Anderson FA, Wheeler HB, Goldberg RJ, Hosmer DW, Patwardhan NA, Jovanovic B, Forcier A, Dalen JE. "A Population-Based Perspective of the Hospital Incidence and Case-Fatality Rates of Deep Vein Thrombosis and Pulmonary Embolism: The Worcester DVT Study." *Arch Intern Med.* 1991;151(5):933-938. doi:10.1001/archinte.1991.00400050081016
- Goldhaber, Samuel Z., MD, Luigi Visani, MD, and Marisa De Rosa, MD. "Acute Pulmonary Embolism: Clinical Outcomes in the International Cooperative Pulmonary Embolism Registry (ICOPER)." *The Lancet* 353.9162 (1999): 1386-389. *ScienceDirect.* Web.
- "Venous Thromboembolism (Blood Clots)." *Centers for Disease Control and Prevention.* Centers for Disease Control and Prevention, 18 Apr. 2017. Web.

Etiology of Expired Patients	Number of Patients
PE Related	12
Cardiothoracic Related	8
Multi-System Organ Failure	3
Cancer	11
End Stage Renal Disease	1
Gastrointestinal Perforation	2
Stroke	1
Subdural Hematoma	1
Vertebra Trauma	1
Unknown	3

© 2017 Lehigh Valley Health Network

610-402-CARE LVHN.org