

Exceeding Survival Rates for ECMO: Making It Happen

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Exceeding Survival Rates for ECMO: Making It Happen

Lehigh Valley Health Network, Allentown, PA

Background: The majority of patients who require extracorporeal membrane oxygenation (ECMO) succumb to their disease without this therapy. Patients in the Lehigh Valley requiring venovenous (VV) ECMO were transferred to other facilities, or they died. Venoarterial (VA) ECMO was provided to post-cardiotomy cardiogenic shock patients but survival was poor. Recognizing the necessity to provide this therapy to our community and region, a multidisciplinary team formed to develop a comprehensive ECMO program, which has exceeded Extracorporeal Life Support Organization (ELSO) reported percentages of survival.

Interprofessional Team

Team members from key disciplines:

- Cardiothoracic surgery
- Cardiology
- Critical Care
- Nursing
- Respiratory Therapy (RT)
- Perfusion
- Device Program Coordinator

Program Objectives

- Standardized patient management and documentation protocols
- Didactic and hands-on training for nursing staff, perfusionists, respiratory therapists, providers
- Nurse Monitored Model of Care

Education

	Initial Education	Continuing Education
Provided by:	ECMO Consultant	Nurse Educator, Bedside Nurse Clinical Experts, RT, Perfusionist
Learners	Everyone	Nurses and RTs

Nurse Monitored Model of Care

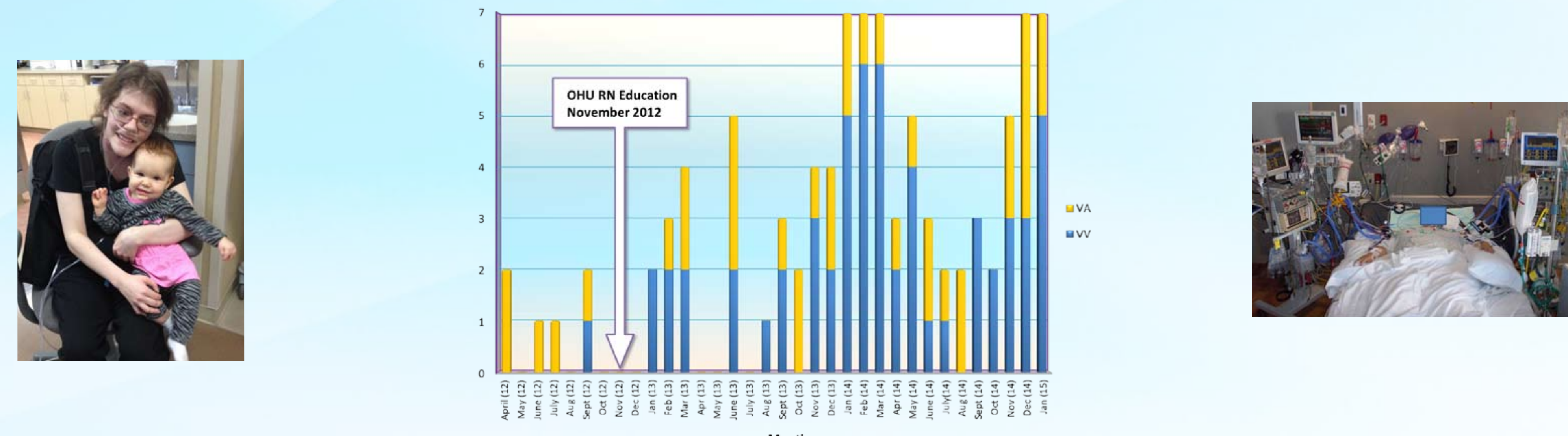
Nurse has full responsibility for monitoring ECMO circuit and caring for ECMO patient.

Improvements and Practice Changes

- A shift in focus from acute care 'ABCs' to long term recovery period
- Increased collaboration:
 - Physical Therapy (PT) instituted early mobilization and 'positioning for function'
 - Nursing initiated a skin care/ turning bundle
 - Wound Care Team instituted daily skin rounds on all ECMO patients
 - Pharmacy recommended individualizing level of sedation based on patient response

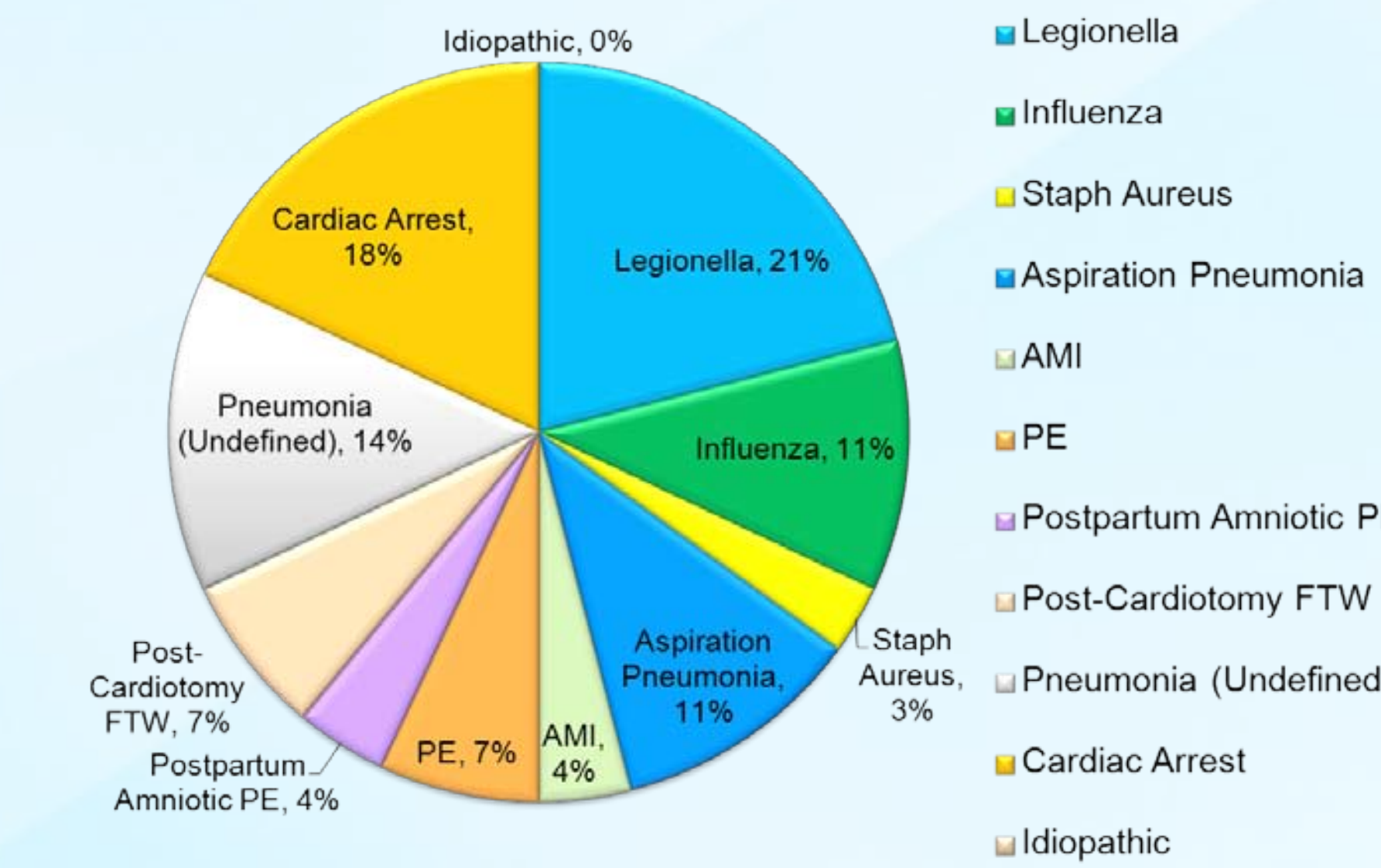
Outcomes

Extracorporeal Membrane Oxygenation Patients Per Month
July 2012 - January 2015



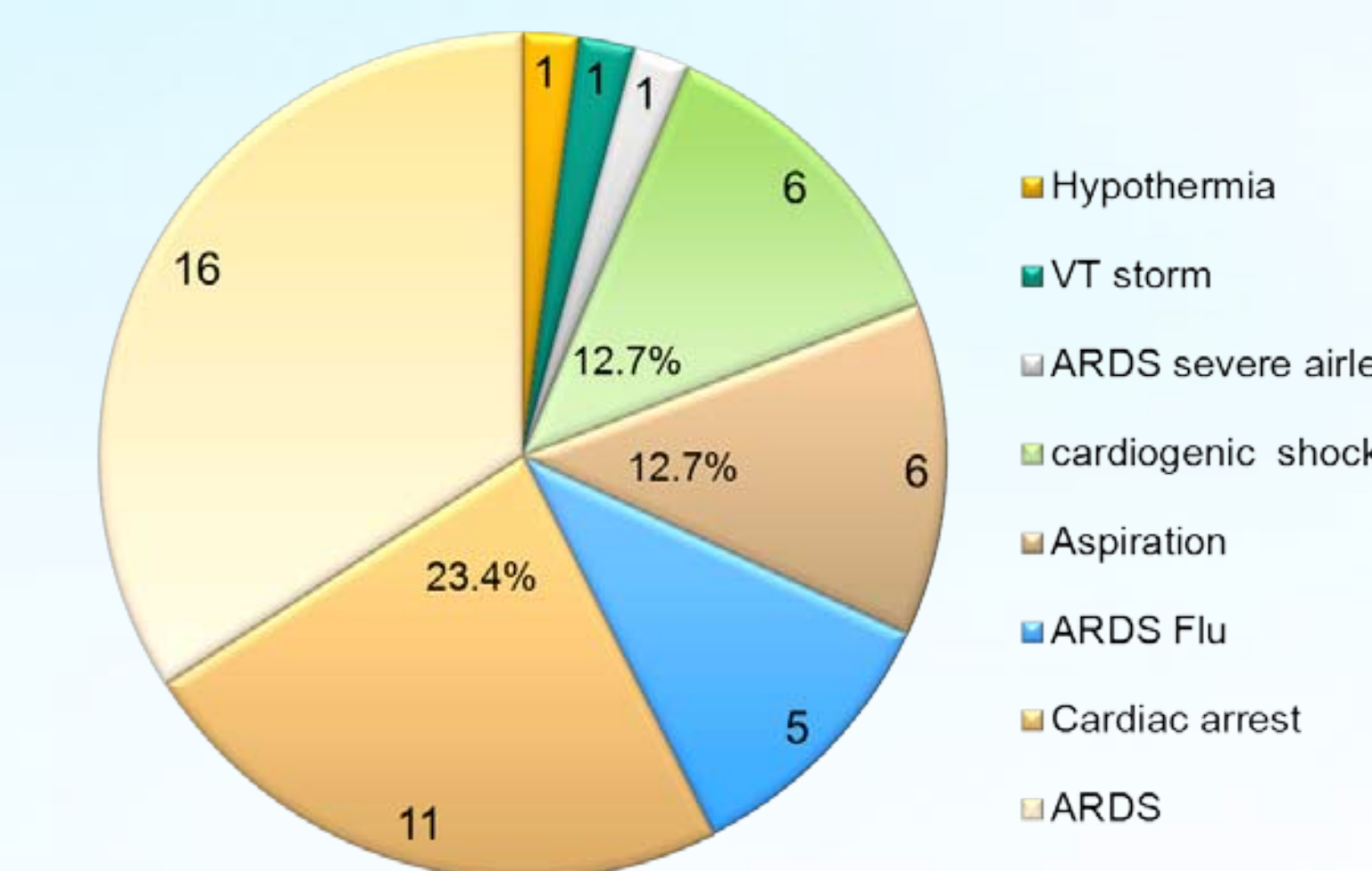
Survival Rates

LVHN ECMO Outcomes 2013
ECMO Etiologies



- Total 29 runs
- V V ECMO 15
- V A ECMO 14
- V V survival 70%
- V A survival 23%

LVHN ECMO Outcomes 2014



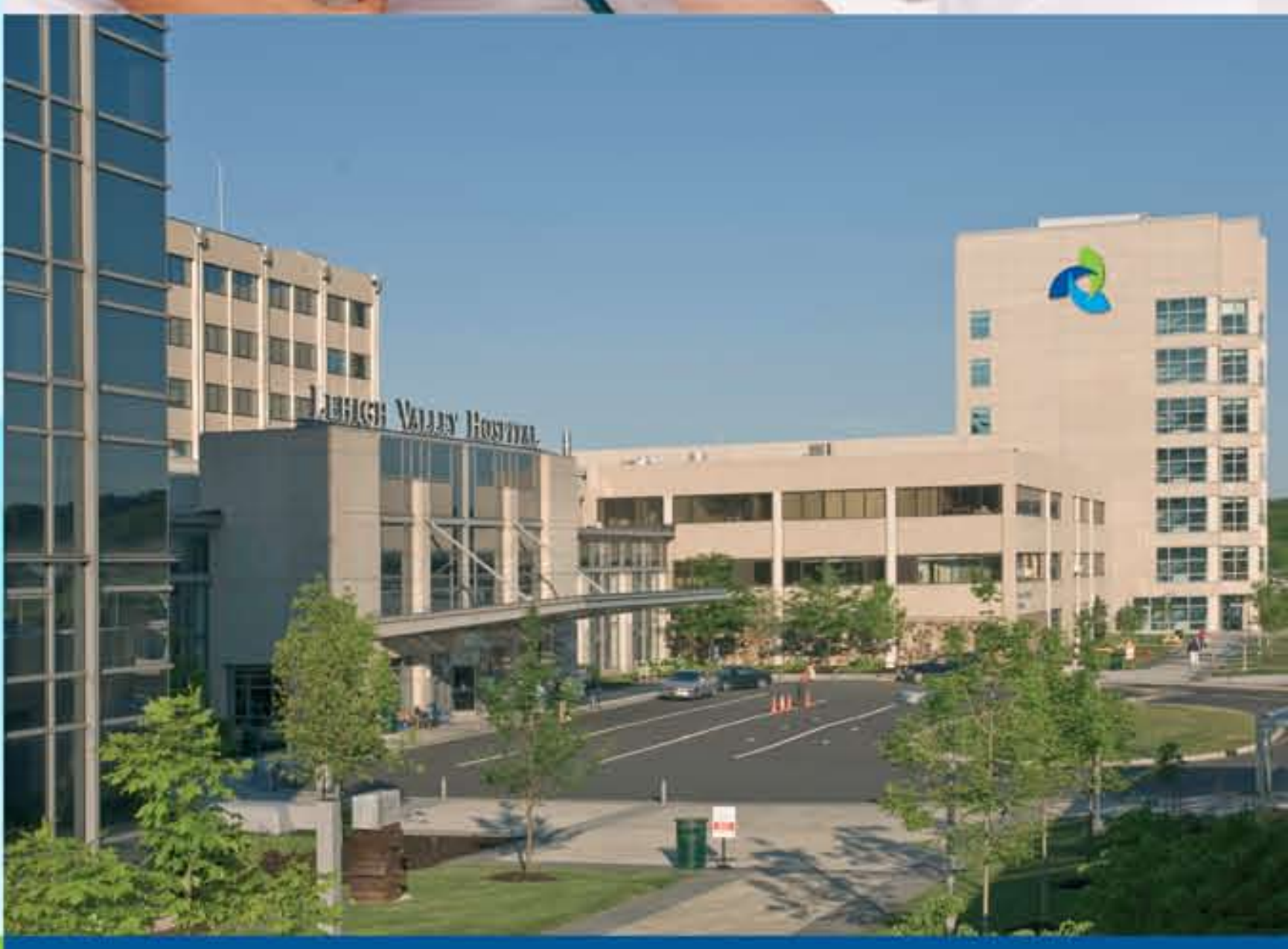
- Total 53 runs
- V V ECMO 36
- V A ECMO 17
- V V survival 69%
- V A survival 59%

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