

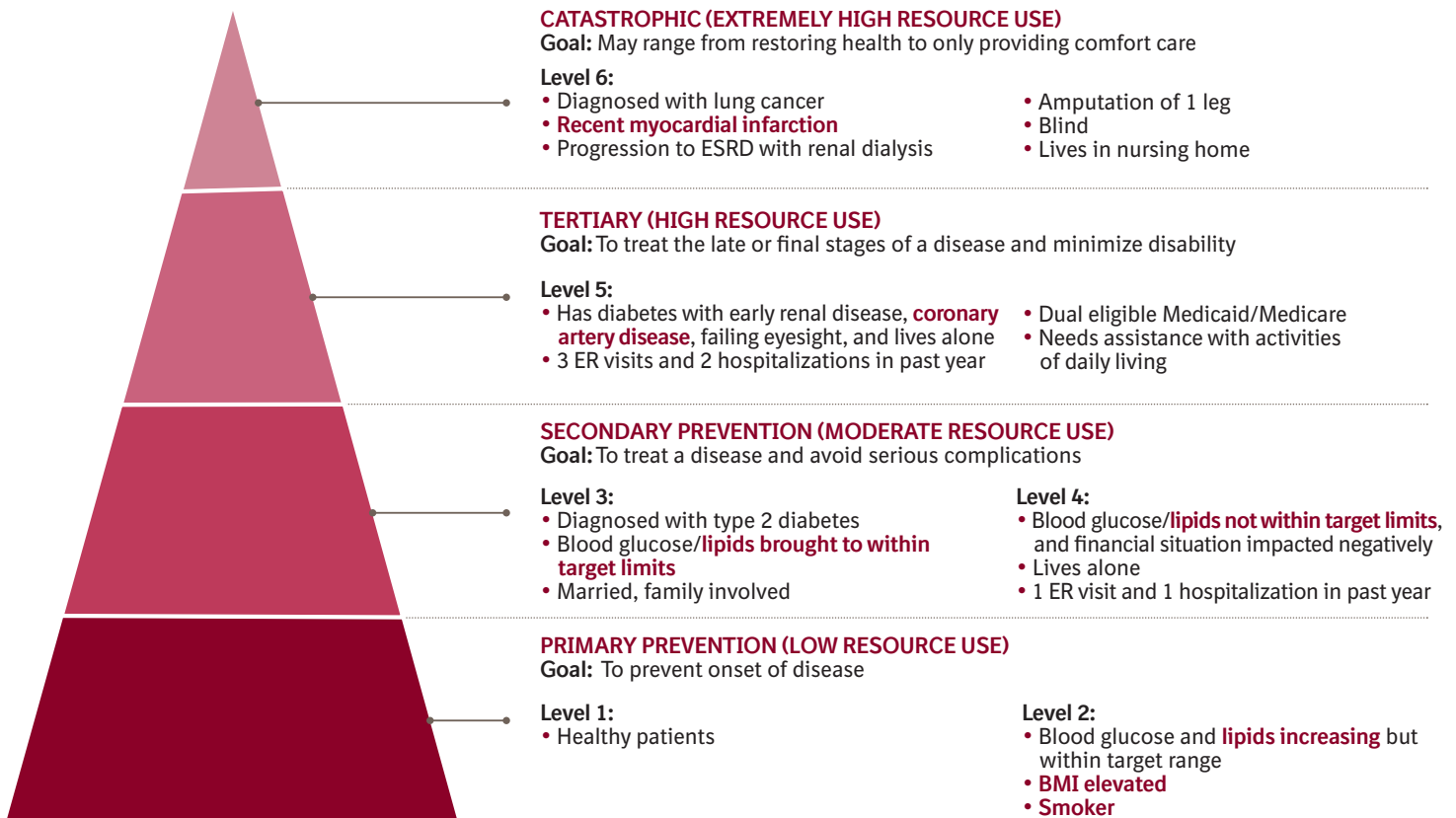
Risk Stratification in Patients With Type 2 Diabetes (T2D) and Cardiovascular Disease (CVD)

- The population health goal of risk stratification is to compile a prioritized list of patients ordered by the level of risk and the reason for the risk¹
- Risk stratification is an important element of population health management, particularly in patients with type 2 diabetes and CVD

Common CVD risk factors in patients with type 2 diabetes are²:

- ✓ Smoking
- ✓ Dyslipidemia
- ✓ Hypertension
- ✓ Albuminuria
- ✓ Overweight/obese
- ✓ Family history of premature coronary disease

Risk Stratification Categories and Levels Using Type 2 Diabetes Case Example³ The Impact of CVD on this Case Example is Highlighted



BMI=body mass index; ESRD=end-stage renal disease.

³CVD=Cardiovascular Disease

Risk Stratification in Action: Joslin Diabetes Center⁴



Joslin Diabetes Center's Registry and Risk Stratification System

- Collects data on key measures of care and provides decision support to primary care providers
- Identifies high-risk patients, recommends patient-specific interventions, and reports a clinic's process and quality metrics for benchmarking and regional comparisons

• Evaluates 5 risk categories:

- 1** Glycemic control
- 2** CVD
- 3** Peripheral vascular disease/
peripheral neuropathy/feet
- 4** Retinopathy
(eye disease)
- 5** Nephropathy
(kidney disease)

- Assigns a risk level for every patient—low, moderate, high, or very high
- Allows for targeted intervention to improve care of subpopulations at high risk

Practice Risk Stratification Summary Example

Jackson-April, 2007

Category	Low	Medium	High	Very High
Glycemic Control	16%	35%	12%	37%
Cardiovascular	4%	31%	45%	19%
Foot Disease	25%	53%	22%	0%
Retinopathy	6%	1%	89%	3%
Nephropathy	18%	74%	5%	3%

Registry and Risk Stratification System Impact

- Used for 3 years at an inner city practice in the Boston area

Outcomes included:

- Significant improvement in mean A1C level ($P < 0.001$)
- Significant increase in documented foot exams ($P < 0.001$)
- Significant reduction in systolic blood pressure ($P < 0.001$)
- Significant improvements in practice outcomes:
 - Percentage of patients with blood pressure <130/80 mm Hg ($P < 0.01$)
 - Percentage of patients with low-density lipoprotein (LDL) cholesterol <100 mg/dL ($P < 0.05$)
- Significant reduction in diastolic blood pressure ($P < 0.001$)

References: 1. Comprehensive Primary Care Initiative. Year 2015 implementation and milestone reporting summary guide. December 2014. <http://innovation.cms.gov/Files/x/CPCI-Implementation-GuidePY2015.pdf>. 2. American Diabetes Association. Standards of medical care in diabetes—2017. *Diabetes Care*. 2017;40(suppl1):S1-S135. 3. American Academy of Family Physicians (AAFP). Risk-stratified care management and coordination. http://www.aafp.org/dam/AAFP/documents/practice_management/pcmh/initiatives/RSCM.pdf. Accessed July 23, 2017. 4. Russell KG, Rosenzweig J. Improving outcomes for patients with diabetes using Joslin Diabetes Center's registry and risk stratification system. *J Healthc Inf Manag*. 2007;21:26-33.