Optimal Staffing to Obtain a CMS 5 Star Staffing Rating

Overview
Muncy Valley Hospital Skilled Nursing Unit (SNU) is a nursing home located in Muncy, Pennsylvania. In past years the SNU had received a rating of five stars for staffing from the Center for Medicare and Medicaid (CMS). Recently, CMS has changed the way the staffing ratings are calculated by adding an acuity component, which takes into account the sickness level of the patient. With this algorithm change, Muncy Valley SNU’s rating had decreased to two stars last year and 3 stars this year.

Objectives
- Improve Muncy Valley Hospital nursing staffing from 3 stars to 5 stars
- Calculate staffing necessity to reach 5 stars
- Calculate the overall costs to reach 5 stars
- Provide tool calculating optimal staff hours per patient/hall while achieving 5 stars

Approach
- Analyzed national nursing home rankings, rating formulas, acuity software systems, and data to determine an algorithm to understand how to obtain a five star rating
- Determined staffing hour threshold to obtain 5 star rating
- Developed linear program in Excel that calculates the optimal staffing ratio to achieve the 5 star rating
- Built tool in Microsoft excel to calculate optimal staff based on patient acuity and allocated staff hours by patient, by hall, and by RUG category

Outcomes
- Tool is able to be used in daily staffing hour management
- Tool provides the scheduler at Muncy Valley SNU the optimal staff numbers and allocation of hours to aid in scheduling
- Bi-weekly cost calculated to obtain the highest possible rating and will be shared with Susquehanna Health System Leadership