Using EHRs and Case Management to Improve Patient Care and Population Health

Session #211, February 22, 2017
Thomas Schiller, MD and Jennifer Kuroda,
SwedishAmerican Health System – A Division of UW

DISCLAIMER: The views and opinions expressed in this presentation are those of the author and do not necessarily represent official policy or position of HIMSS.
Speaker Introduction

Thomas Schiller, MD
Chief Clinical Integration Officer, Vice
President Quality
SwedishAmerican Health System – A
Division of UW
Speaker Introduction

Jennifer Kuroda
Manager, Quality Improvement
SwedishAmerican Health System – A Division of UW
Conflict of Interest

None to report.
Agenda

• About Us
• Journey to Excellence – Diabetes Management
• Development of Case Management Program
• Enhancing Population Health
• What’s Next?
Learning Objectives

• Discuss how analytics are helping healthcare providers use data from electronic medical records to improve quality of care
• Discuss how clinical data in EMR systems helped facilitate the evolution of care management from a payer-driven exercise to a provider-focused model
• Discuss how data and analytics can be used to prevent hospitalizations among high-risk patients
An Introduction of How Benefits Were Realized for the Value of Health IT

- **SATISFACTION**: SwedishAmerican Medical Group (SAMG) case management leads to better engagement, which has been shown to increase patient satisfaction
- **TREATMENT/CLINICAL**: Case management has helped decrease admissions, readmissions and ED visits
- **ELECTRONIC INFORMATION/DATA**: SAMG uses data and analytics to find patients who need and will utilize case management
- **PATIENT ENGAGEMENT/POPULATION MANAGEMENT**: Patients engaged via SAMG’s case management are less likely to be admitted or readmitted into an acute care facility
- **SAVINGS**: Case management helps SAMG keep costs down
About Us

• Located in Rockford, IL
• 2 Hospitals
• Regional Cancer Center
• 25 Clinics

Primary Care & Specialty
  – Average # of annual outpatient visits : 424,170
  – Approximately 103,000 unique lives touched annually

• Home Health Services
• Merged with UW
Medical Group Profile

- Established in 1994
- 16 Specialties
- 146 Physicians
- 31 APN’s
- 6 Case Managers
- 1 Social Worker
SAMG Diabetes Management
Keeping it in the 90th percentile

• Quality Metric since early 2000’s
• Compensation Scorecard
• Transparent Reporting
• Case Management Program
• Patient Education
• Together 2 Goal
HbA₁c Control, by Group — Ages 18–89

- 988,000 patients, aged 18–89, across 28 medical groups, with type 2 diabetes and ≥1 E&M visit 4/2014 – 3/2015
- Overall control rate (HbA1c < 8.0): 57.7%, range across medical groups: 70.0 – 42.9%
Quality Metrics - Diabetes
SAMG Pillar Scorecard

Diabetic Care Patients with 1 or more office visits TESTED between 11/01/2015 and 10/31/2016
Total # of patients 8,066

<table>
<thead>
<tr>
<th>Clinical Indicators</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Pressure &lt;140/80</td>
<td>51%</td>
</tr>
<tr>
<td>Blood Pressure &lt;140/90</td>
<td>73.7%</td>
</tr>
<tr>
<td>Blood Pressure &lt;130/80</td>
<td>40%</td>
</tr>
<tr>
<td>A1c Test Rate</td>
<td>91.7%</td>
</tr>
<tr>
<td>A1c &lt;=7</td>
<td>59.3%</td>
</tr>
<tr>
<td>A1c &lt; 8</td>
<td>78.3%</td>
</tr>
<tr>
<td>A1c &gt; 9</td>
<td>19.8%</td>
</tr>
<tr>
<td>Statin Prescribed</td>
<td>60.4%</td>
</tr>
</tbody>
</table>
Case Management

Why did we choose implement this model?

• Provide Better Continuity of Care
• Provide Care Coordination Services for High Risk Patients
• Prevent Readmissions
• PCMH Practices – PCMH Level III Recognized in 2012
• Population Health Management
Case Management

How did we get started?

• Hired first Care Coordinator in 2010
  – Minimal face-to-face contact
  – Telephone follow-up’s
• Two embedded by 2012
• Six embedded by 2014
• Social Worked added in 2014
Case Management

What is our primary focus?

• Diabetes
• Hypertension
• Chronic Obstructive Pulmonary Disease
• Coronary Artery Disease
• Chronic Heart Failure
• Readmissions
• Discharges
Case Management

Key Elements of Implementation

• Identification and Communication of Program Goals
• Standardization of Interventions to Achieve Patient Outcomes
• Population Identification and Integration of Patient Information
• Setting Performance Goals and Measuring Outcomes
• Analyzing and Evaluating the Program
Case Management
Identification and Communication of Program Goals

• What is the role of the case manager?
  – High Priority Patients: Admissions & Discharges
  – Chronic Disease Patients
  – Not to fill the role of nurse educator for all patients

• Physician and Staff Education
• Continual Re-education
Case Management
*Standardization of Interventions to Achieve Patient Outcomes*

Are all the care coordinators providing the same care?

- **Chronic Heart Failure**
  - Discharges contacted within 2 business days
  - Weekly follow-up calls
  - Goals: Prevent 30-day readmission, on-going life style changes, etc.

- **Standardized Protocols - Diabetes**
  - Insulin Titration
  - LDL and A1c tests

- **Other Protocols**
  - Pneumococcal & Influenza
**Case Management**

*Population Identification and Integration of Patient Information*

- Population Analytics Reports
  - Likelihood to be admitted in the next six months
  - P1 Report – High Priority Patients
- Other Reports
  - Daily Discharges
  - Daily Admissions
  - Patients with Care Plans with Office Visits
- Care Plans Developed Based on Reports
### Diabetic P1 (High Priority) Patient List Grouped by Clinic and PCP

Chosen for List by meeting the following:
- **Diagnosis of Diabetes**
- **18 to 75 years of Age**
- **Office or Lab Visit with Physician or Nurse from 10/02/2014 thru 10/01/2015**
- **Most recent values “in reporting period” 10/02/2014 thru 10/01/2015 are A1c > 9 AND LDL >100**

Please Note: LDL Value of 999999 represents Test Not Performed, in some cases a Direct LDL would need to be performed, protocol is in place for lab technicians to do so.

<table>
<thead>
<tr>
<th>Location Name</th>
<th>Provider Name</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Patient</th>
<th>MRN</th>
<th>DOB</th>
<th>Care Plan?</th>
<th>BP</th>
<th>BP Date</th>
<th>A1c</th>
<th>A1c Date</th>
<th>LDL</th>
<th>LDL Date</th>
<th>Home Phone</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>140/78</td>
<td>08/29/2015</td>
<td>12.0</td>
<td>11/09/2009</td>
<td>136</td>
<td>08/29/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>122/74</td>
<td>07/29/2015</td>
<td>11.3</td>
<td>07/30/2015</td>
<td>147</td>
<td>07/28/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>118/76</td>
<td>08/30/2015</td>
<td>10.9</td>
<td>04/25/2015</td>
<td>161</td>
<td>04/24/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>117/81</td>
<td>07/21/2015</td>
<td>12.0</td>
<td>02/14/2015</td>
<td>128</td>
<td>02/13/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACTIVE</td>
<td>138/76</td>
<td>03/20/2015</td>
<td>11.4</td>
<td>05/16/2015</td>
<td>178</td>
<td>05/16/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACTIVE</td>
<td>170/86</td>
<td>12/04/2014</td>
<td>11.8</td>
<td>12/04/2014</td>
<td>133</td>
<td>12/04/2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>139/61</td>
<td>08/12/2015</td>
<td>17.8</td>
<td>07/07/2015</td>
<td>999999</td>
<td>07/07/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACTIVE</td>
<td>133/89</td>
<td>08/12/2015</td>
<td>10.3</td>
<td>05/04/2015</td>
<td>102</td>
<td>05/02/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACTIVE</td>
<td>101/63</td>
<td>08/08/2015</td>
<td>12.0</td>
<td>11/20/2014</td>
<td>211</td>
<td>11/20/2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>150/74</td>
<td>08/27/2015</td>
<td>9.9</td>
<td>07/28/2015</td>
<td>110</td>
<td>06/04/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>113/77</td>
<td>04/24/2015</td>
<td>13.1</td>
<td>04/25/2015</td>
<td>136</td>
<td>04/24/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>132/68</td>
<td>11/18/2014</td>
<td>10.6</td>
<td>09/18/2014</td>
<td>133</td>
<td>09/18/2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACTIVE</td>
<td>124/71</td>
<td>08/08/2015</td>
<td>12.8</td>
<td>07/09/2015</td>
<td>207</td>
<td>07/08/2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Case Management

Setting Performance Goals and Measuring Outcomes

• Scorecard Developed in 2013
  – Specific to Patients with Care Plans
  – Used population analytics reports for data

• Care Coordination Goals
  – Close Gaps in Care by Ensuring Diabetic Patients with a Care Plan Have Current A1c and LDL Tests Completed
  – Reduce the Bundled Readmission Rate – MSO Aggregate (AMI, CHF, COPD, PNEUM)
## Case Management: Overview

<table>
<thead>
<tr>
<th>Total Patients Population (Active w/in 36 Months; SAMG PCP)</th>
<th>May-13</th>
<th>Jan-16</th>
<th>Feb-16</th>
<th>Mar-16</th>
<th>Apr-16</th>
<th>May-16</th>
<th>Jun-16</th>
<th>Jul-16</th>
<th>Aug-16</th>
<th>Sept-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>44,512</td>
<td>60,659</td>
<td>61,118</td>
<td>58,934</td>
<td>59,404</td>
<td>59,769</td>
<td>59,947</td>
<td>60,298</td>
<td>60,842</td>
<td>61,246</td>
<td></td>
</tr>
</tbody>
</table>

| Total Patients w Active Care Plan                        | 1,539  | 3,309  | 3,025  | 2,693  | 2,510  | 2,429  | 1,402  | 712    | 657    | 652     |

Total Number of Case Managers: 6  
Total Number of Social Workers: 1  
Clinics Served: 9
Case Management
Analyzing and Evaluating the Program

• Review Scorecard
  – Case Management Meetings
  – Quality Committee
  – Operation Manager Committee
Case Management

**Patient Engagement**

- Face-to-Face Visits
  - Standardized Educational Materials Available
  - Collaboration with Providers and Clinic Staff

- Follow-up Phone Calls

- Self-Management Support Group – Focuses on Diabetes
  - “Healthy Living” Class
  - Emphasize the Patient's Central Role
  - Use Effective Self-Management Support Strategies that Include Assessment, Goal-Setting, Action Planning, Problem-Solving and Follow-up

- Increased Satisfaction
Hello

Get well soon. I hope things go okay. Let me know if you need anything. I will be happy to help. Just a note...
The Data... In the beginning
30-Day Readmission Rate: CHF
30-Day Readmission Rate: COPD
Diabetes Management

*Patients With Care Plan*

BP < 140/90 (Most Recent BP)
Diabetes Management

*Patients With Care Plan*

A1c Testing (Annually)
Diabetes Management

Patients With Care Plan

A1c <= 7
Diabetes Management

Patients With Care Plan

A1c < 8
Diabetes Management

Patients With Care Plan

A1c > 9
Beyond Case Management

Other Areas of Population Health

• Population Health Scorecard
• Daily Care Gap Report
• Adult Immunizations
# Population Health Management Dashboard

<table>
<thead>
<tr>
<th>Access to Care</th>
<th>Patient Satisfaction</th>
<th>Preventive Care</th>
<th>Chronic Care</th>
<th>Cost of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third Next Available App.</td>
<td>CAFS - Scores Likely to Recommend</td>
<td>Preventive Care</td>
<td>Chronic Care</td>
<td>Systematic Testing</td>
</tr>
<tr>
<td>11/30/16</td>
<td>11/30/16</td>
<td>12/15</td>
<td>11/30/16</td>
<td>12/15</td>
</tr>
<tr>
<td>11/30/16</td>
<td>11/30/16</td>
<td>12/15</td>
<td>11/30/16</td>
<td>12/15</td>
</tr>
</tbody>
</table>

### Family Practice

- **Access to Care**
  - 1.0
  - 2.0

- **Patient Satisfaction**
  - 3.0
  - 4.0

- **Preventive Care**
  - 5.0
  - 6.0

- **Chronic Care**
  - 7.0
  - 8.0

- **Cost of Care**
  - 9.0
  - 10.0
<table>
<thead>
<tr>
<th>Access to Care</th>
<th>Patient Satisfaction</th>
<th>Preventive Care</th>
<th>Chronic Care</th>
<th>Cost of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Third Next Available Appt</strong></td>
<td><strong>Care</strong></td>
<td><strong>Satisfaction</strong></td>
<td><strong>Preventive Care</strong></td>
<td><strong>Chronic Care</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>HTN Control</strong> (&lt;140/90)**</td>
</tr>
<tr>
<td>11/30/16</td>
<td>11/30/16</td>
<td>11/30/16</td>
<td>11/30/16</td>
<td>11/30/16</td>
</tr>
<tr>
<td><strong>Goal</strong></td>
<td>50</td>
<td>50</td>
<td>71.6</td>
<td>62.8</td>
</tr>
</tbody>
</table>

**Metric Information:**
- **Third Next Available Appt:** Average Third Next Available Appt over course of month. Same Day and Frozen Slots do not count; Set to Internal Goal
- **Likely to Recommend Care Provider:** Press Ganey Results; Percentile Rank and Raw Score is reflected; Set to Internal Goal
- **Pediatric Immunizations Combo B:** Patients 2 yrs of age that have received all recommended vaccinations; Set to HEDIS 90th Percentile
- **Pneumococcal Immunizations:** Patients 65+ that have received Pneumococcal Immunization
- **Colonoscopy Screening:** Patients 50-75 with a visit in reporting period that have received FOBT (annually), Flexible Sigmoidoscopy (5 years), or Colonoscopy (10 years); Set to HEDIS 90th Percentile
- **Cervical Cancer [PAP] Screening:** Female patients between 21-64 are required to have cervical cancer screening within 3 years of their visit date
  - Or if they are between 30 and 64 as of their visit date, they can be screened every 5 years as long as they have a paps and hpv screening within 4 days of each other in that 5 year time frame and they must be in data mart to require testing
- **Mammography (MAM) Screening:** Female patients between 40-75 are required to have mammography screening within 12 months of their visit date and they must be in data mart to require testing
- **Depression Screening:** Patients 12+ with a physical in previous 12 months or high risk diagnosis within 24 months that have received PHQ-2 or PHQ-9 Depression Screening at least once in reporting period.
  - High Risk Diagnosis: Included: Diabetes, CHF, COPD, Asthma, CKD, MDD, ADD/ADHD, HTN, Chronic Pain; Set to strictest PCN Goal
- **HTN Control:** HTN Patients 18-85 with a visit in reporting period with most recent BP <140/90. If patient is 60+ and not diabetic <150/90, else 140/90; Set to HEDIS 90th Percentile
- **DM A1c Control:** DM Patients 18-75 with a visit in reporting period with most recent A1c < 6%; Set to HEDIS 90th Percentile
- **COPD Spirometry Testing:** Patients with newly diagnosed COPD, Chronic Bronchitis, or Emphysema in the reporting period that received Spirometry/FIT testing 2 years prior or 6 months after diagnosis date; Set to HEDIS 90th Percentile
- **ED Visits Per 1,000:** Rate of ED Visits per 1,000 patients in a providers panel; Set to Millman Criteria for ED/ER Utilization
- **IP Visits Per 1,000:** Rate of IP Visits per 1,000 patients in a providers panel; Set to CDC IP Visits Utilization
- **Generic Drug Utilization:** Rate at which providers prescribe generic drugs; Set to Internal Goal
## Daily Patient Care Gap

**Provider Summary - 01/06/2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Age</th>
<th>Last BP Date</th>
<th>PAP</th>
<th>MAM</th>
<th>Colorectal Screening</th>
<th>Diabetes Control</th>
<th>Last A1C Date</th>
<th>Pneumo</th>
<th>Depression</th>
<th>Spirometry</th>
<th>Peds</th>
<th>PMMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am</td>
<td>25</td>
<td>03/11/2016</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>9:40 am</td>
<td>35</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>10:20 am</td>
<td>65</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>11:00 am</td>
<td>2</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1:00 pm</td>
<td>32</td>
<td>09/16/2016</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>1:40 pm</td>
<td>46</td>
<td>12/29/2015</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2:00 pm</td>
<td>49</td>
<td>12/07/2016</td>
<td>!</td>
<td>!</td>
<td>!</td>
<td>!</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2:20 pm</td>
<td>52</td>
<td>12/29/2015</td>
<td>!</td>
<td>!</td>
<td>!</td>
<td>!</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>36</td>
<td>12/09/2016</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>3:20 pm</td>
<td>76</td>
<td>01/03/2017</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>!</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

---

**Notes:**
- PAP: Preventive Adult Panel
- MAM: Mammogram
- Colorectal Screening
- Diabetes Control
- Last A1C Date
- Pneumo: Pneumonia
- Depression
- Spirometry
- Peds: Pediatric
- PMMS: Preventive Measles Mumps Rubella Series
**Metric Information:**

**Cervical Cancer (PAP) Screening:** Female patients between 21-64 are required to have cervical cancer screening within 3 years of their visit date or if they are between 30 and 64 as of their visit date, they can be screened every 5 years as long as they have a pap and hpv screening within 4 days of each other in that 5 year time frame and they must be in data mart to require testing.

**Mammography (MAM) Screening:** Female patients between 40-75 are required to have mammography screening within 12 months of their visit date and they must be in data mart to require testing.

**Colorectal Cancer Screening:** Patients 50-75 with a visit in reporting period that have received FOBT (annually), Flexible Sigmoidoscopy (5 years), or Colonoscopy (10 years); Set to HEDIS 90th Percentile.

**DM A1c Control:** DM Patients 18-75 with a visit in reporting period with most recent A1c < 9; Set to HEDIS 90th Percentile.

**HTN Control:** HTN Patients 18-85 with a visit in reporting period with most recent BP <140/90; if patient is 60+ and not diabetic <150/90, else 140/90; Set to HEDIS 90th Percentile.

**Pneumococcal Immunizations:** Patients 65 to 67 that have received Pneumococcal Immunization of either Pnuemococcal-PCV13 OR Pnuemococcal-PPV23 OR Pnuemococcal Vaccine, Unspecified Formulation. Patients 68+ that have received BOTH Pnuemococcal-PCV13 AND Pnuemococcal-PPV23 OR Pnuemococcal Vaccine, Unspecified Formulation.

**Depression Screening:** Patients 12+ with a physical in previous 12 months or high risk diagnosis within 24 months that have received PHQ-2 or PHQ-9 Depression Screening at least once in reporting period. High Risk Diagnosis’ Included: Diabetes, CHF, COPD, Asthma, CKD, MDD, ADD/ADHD, HTN, Chronic Pain; Set to strictest PCN Goal.

**COPD Spirometry Testing:** Patients with newly diagnosed COPD, Chronic Bronchitis, or Emphysema in the reporting period that received Spirometry/PFT testing 2 years prior or 6 months after diagnosis date; Set to HEDIS 90th Percentile.

**Pediatric Immunizations Combo 10:** Patients 2 months to 3 years of age that have received all recommended vaccinations shown below; Set to HEDIS 90th Percentile.
  - DTAP >=4; IPV >=3; FLU >=2; MMR >=1; HEP A >=1; PCV >=4; HEP B >=3; ROTAVIRUS_TWO >=2 or ROTAVIRUS_THREE >=3; HIB >=3; VZV >=1;
Spirometry

Graph showing_spirometry_test_rate against dates from 9/1/2015 to 9/1/2016. The graph compares the spirometry test rate for care plan patients and all patients.
Depression Screening

- Depression Screening - Care Plan Patients
- Depression Screening - All Patients
Improving Adult Immunization Rates

Influenza & Pneumococcal

Jennifer Kuroda, Quality Improvement Manager

Background

SwedishAmerican Medical Group began this year-long initiative in April 2015 with the simple intent to increase both pneumococcal and influenza rates for adults in our primary care group. The most significant rate of improvement was achieved with the pneumococcal aged 65+ years measure (22% increase), but overall rates increased in all three areas of the initiative, including pneumococcal aged 18-64 years, high risk (7.3% increase) and influenza (5% increase). Minimum goals were set based on CDC National Health Interview Survey (NHIS) estimated national immunization rates for 2012-2014 time periods.1,2

Purpose

The purpose of this initiative is to increase adult immunization rates, which leads to an increase in quality of care for the patient.

Conclusions

Based on the results of this initiative it has been determined that:

- Signage has an impact on patient education
- Ongoing education of staff and providers keeps initiatives in the forefront
- Physician compensation has a positive impact on quality initiatives

Methods

- Step 1: Data was collected to identify the baseline immunization rates
- Step 2: Dissemination and implementation strategies were developed.
- Step 3: Evaluation of implementation and strategies
  - Continued data collection to monitor rates

Results

- Pneumococcal Vaccine Rates
  - Ages 65+
  - Multiple Influenza

- Influenza Vaccine Rates

Next Steps

- Focus on patients with high risk for pneumococcal
- Specialty clinics to administer vaccinations
- Bi-Directional Interface with the State Vaccine Registry
- Patient outreach
- Identify adult patients needing a vaccine(s) via daily care gap report

References


Acknowledgements

Thank you to the Leadership Team and SANG Quality Committee at SwedishAmerican for supporting this initiative.
Population Health
Adult Immunizations

Group DQ: Pneumococcal Vaccine Rates
(Any PV, Age 65+)
Multiple Periods

<table>
<thead>
<tr>
<th>Period</th>
<th>Intervention 1</th>
<th>Intervention 2</th>
<th>Intervention 3</th>
<th>Intervention 4</th>
<th>Additional 2 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Intervention</td>
<td>47.5%</td>
<td>55.5%</td>
<td>58.8%</td>
<td>70.5%</td>
<td>75.1%</td>
</tr>
<tr>
<td>Intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarter 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarter 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarter 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarter 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Net Change in % Patient Vaccination Rate (Pre-Intervention to Intervention): 22%
Population Health

Adult Immunizations

Group DQ: Pneumococcal Vaccine Rates (Any PV, Age 19-64, High Risk) Multiple Periods

- Collaborative Intervention Period Vaccination Rate: 28.2%
- Group DQ Intervention Period Vaccination Rate: 19.6%

- Pre-Intervention Period
- Intervention Quarter 1
- Intervention Quarter 2
- Intervention Quarter 3
- Intervention Quarter 4
- Additional 2 Months

Net Change in % Patient Vaccination Rate (Pre-intervention to intervention): 7.3%

AMGA Foundation
Population Health
Adult Immunizations

Group DQ: Influenza Vaccine Rates
Multiple Periods

Collaborative Intervention Flu Vaccination Rate: 37.5%

25.8%
31.8%

H1N1 Vaccination Rate 07/2011 - 04/2015
Intervention Flu Vaccination Rate 07/2015 - 04/2016

AMGA Foundation
Adult Immunizations

Patients With Care Plan

Pneumococcal (65+)

60% 65% 70% 75% 80% 85%
What’s Next?

- Monitoring use of Statins – Together 2 Goal
- PCMH 2014 Standards/Recognition
- Enhancing Daily Care Gap Report
- Case Management Redesign
  - Using population analytics to analyze patient population
  - Highest Risk/ Highest Utilization
  - Cap number of patients on care plans
A Summary of How Benefits Were Realized for the Value of Health IT

- **Satisfaction**: Positive Patient Feedback
- **Treatment/Clinical**: Decreases admissions, readmissions, ED visits and helps close gaps in care
- **Electronic Information/Data**: Enhances information for providers
- **Patient Engagement/Population Management**: Allows better management of the population as a whole – decreasing admissions, closing gaps in care, etc.
- **Savings**: Reduces costs and increases provider efficiency
Questions

• Thomas Schiller – tschiller@swedishamerican.org
• Jennifer Kuroda – jkuroda@swedishamerican.org