# Measuring the Impact of the Healthy Outcomes Plan: Preliminary Evaluation

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*"All things are created twice; first mentally; then physically. The key to creativity is to begin with the end in mind, with a vision and a blueprint of the desired result."*

— Stephen Covey

Preventable Inpatient Visits

Preventable ED Visits

Care Plan Executed

Patient Engagement

Identification of Behavioral Health Needs

Reduction of Avoidable ED and Readmission

Reduction on Total Charges – Inpatient and ED Visits

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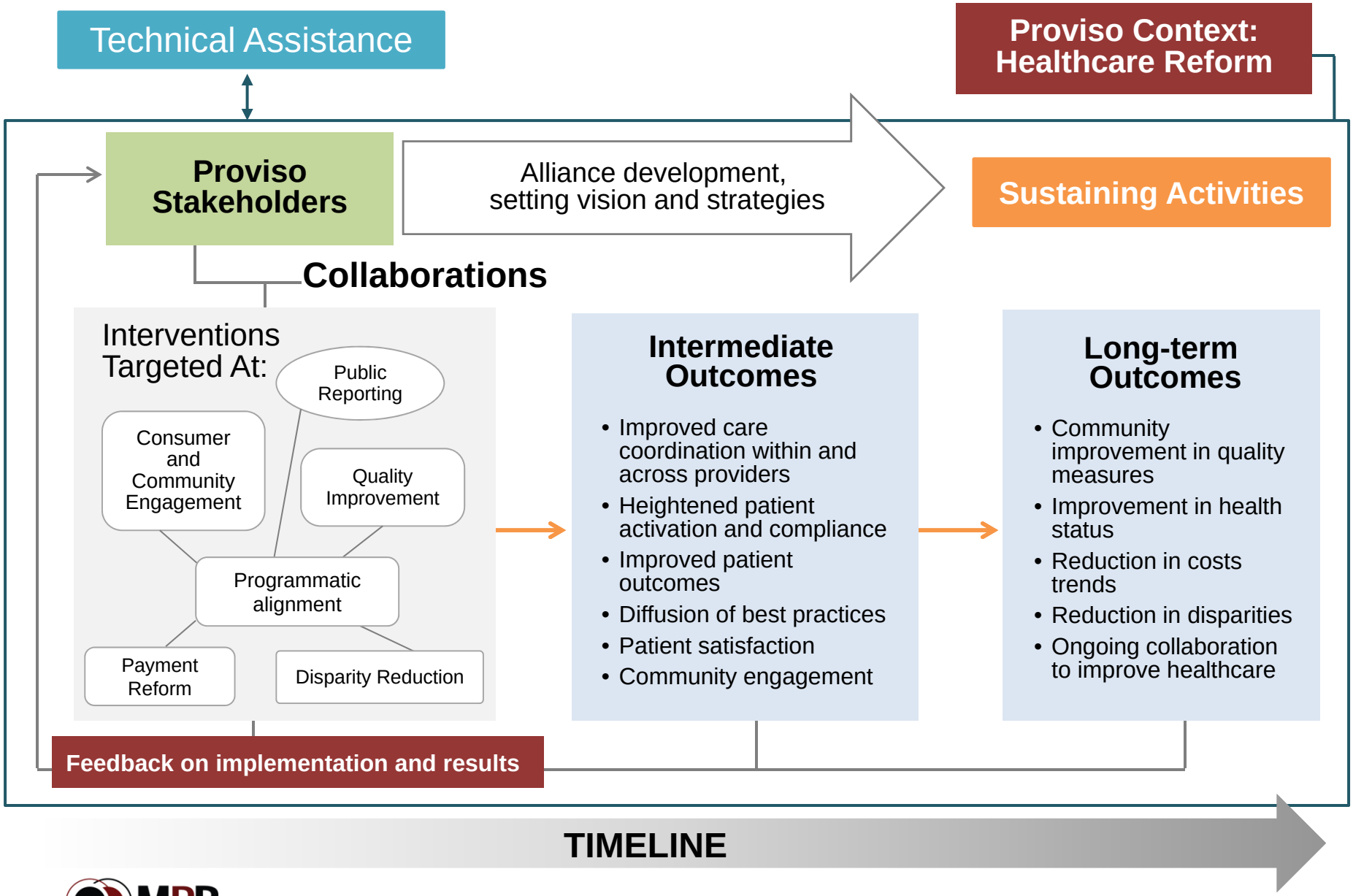
# Hospital and Clinic Proviso Evaluation Framework

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# Evaluation Questions and Data Elements – Part 1 Presentation – September 24, 2015

INTERVENTIONS

- How does participation in HOP improve the quality of participants health? Hospital Discharge Data
- How does participation in HOP impact total charges for inpatient and ED stays? Hospital Discharge Data
- How does participation in HOP increase consumer engagement? Patient Activation Measure
- How does participation in HOP result in greater program alignment to meet the needs of uninsured? GAINS (Behavioral Health)

# Evaluation Questions and Data Elements – Part 2 Presentation TBD

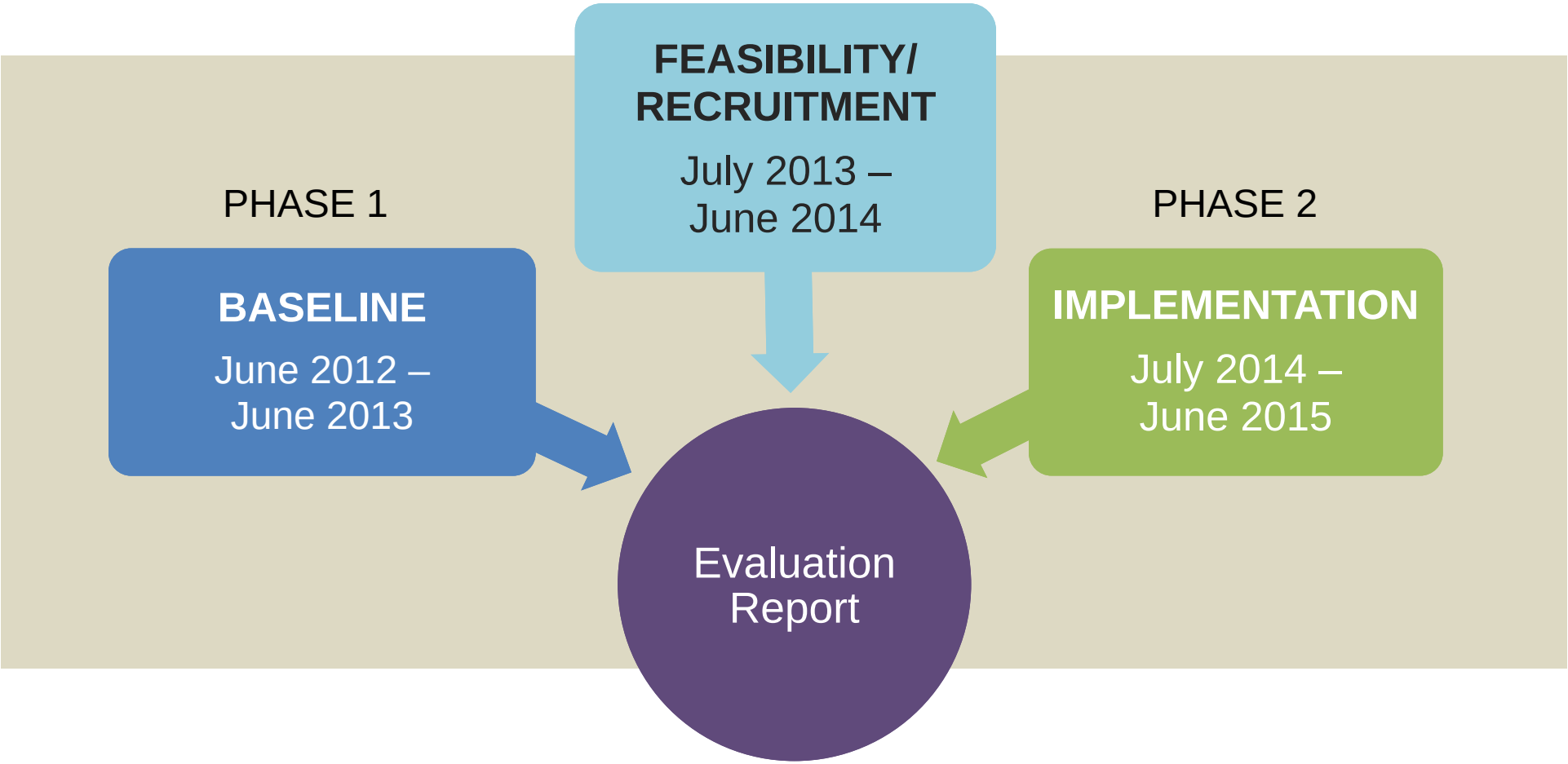
COLLABORATION

- Does HOP increase collaboration across service delivery entities serving the uninsured? Collaboration Index with Case Study Interviews; Hospital and Community Partnerships; Development of Common Reporting

- Does HOP participation result in enhanced public reporting? Hospital Reports; Participation/Enrollment; Adoption of Common Reporting Tools and Measurements

- Does HOP facilitate the reduction of health disparities by addressing social and cultural determinants as a component of the care plan? SDOH Standardized Tool

# Evaluation Time Period

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# HOP Population Demographics

## 8,342 Participants Enrolled for at Least Six Months

| | Baseline Year | Feasibility | Implementation |
|---|---|---|---|
| Male Gender | 40.79% | 43.27% | 42.05% |
| Female Gender | 59.19% | 56.73% | 57.95% |
| African American Race | 50.62% | 49.40% | 49.96% |
| White Race | 47.25% | 48.10% | 47.91% |
| Other Race/Ethnicity | 2.13% | 2.50% | 2.13% |
| Ages 18-24 | 10.09% | 8.64% | 6.68% |
| Ages 25-44 | 43.49% | 41.82% | 41.91% |
| Ages 45-54 | 34.65% | 34.46% | 34.92% |
| Ages 55-64 | 11.57% | 14.91% | 16.15% |
| Total Patients With Claims (% of Total Participants) | 5,403 (64%) | 6,640 (79%) | 5,498 (66%) |

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# HOP Inpatient and ED Utilization

## 8,342 Participants Enrolled for at Least Six Months

| Time Period | Total Patients | Total Inpatients | Inpatients With 2+ Discharges | Total Emergency Department Patients | Emergency Department Patients With 2+ Discharges |
|---|---|---|---|---|---|
| Baseline Year | 5,403 | 1,337 | 481 | 5,196 | 3,819 |
| Feasibility Year 1 | 6,640 | 2,171 | 794 | 6,293 | 4,864 |
| Implementation Year 1 – To Date | 5,498 | 1,640 | 627 | 5,192 | 3,810 |

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# EVALUATION QUESTION 1

"How does participation in HOP improve the quality of participants' health?"

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# PHASE I: COMPARISON OF BASELINE (FY 13) TO FEASIBILITY YEAR 1 (FY 14)

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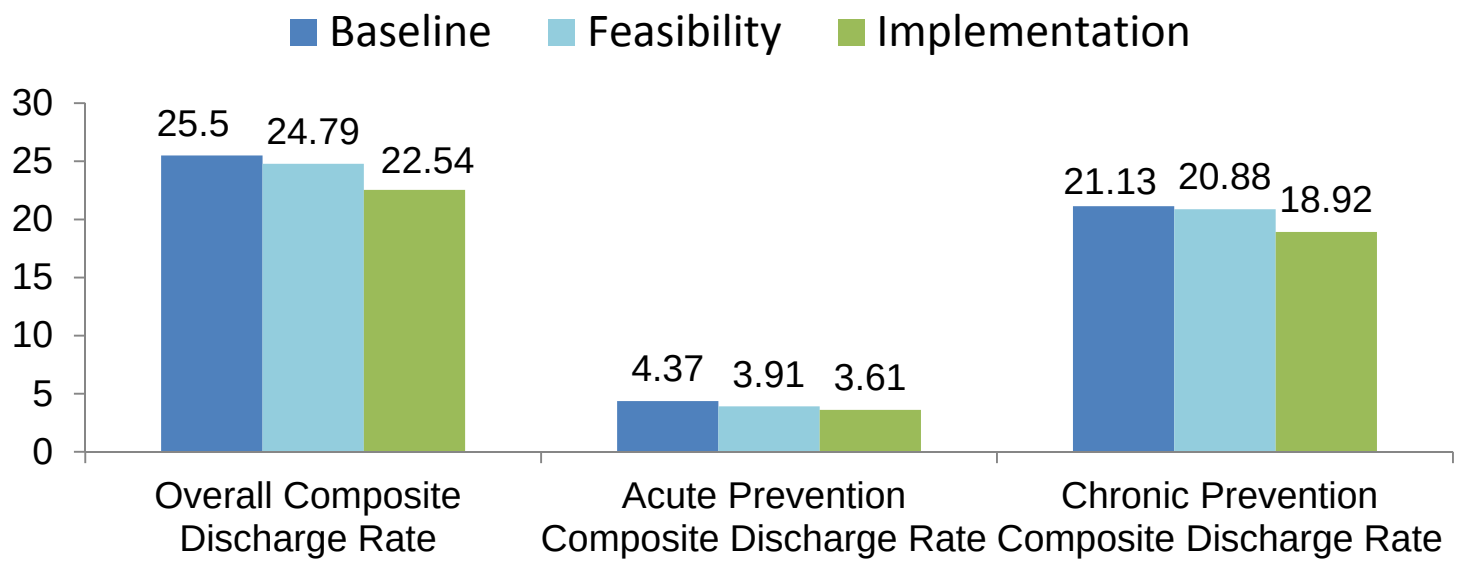
Key Findings:

# Preventable Inpatient Stays

- Preventable inpatient stays continued to drop during the first full year of implementation (FY 15).
- The monthly overall and chronic visits also decreased, as well as the average acute prevention composite visits.

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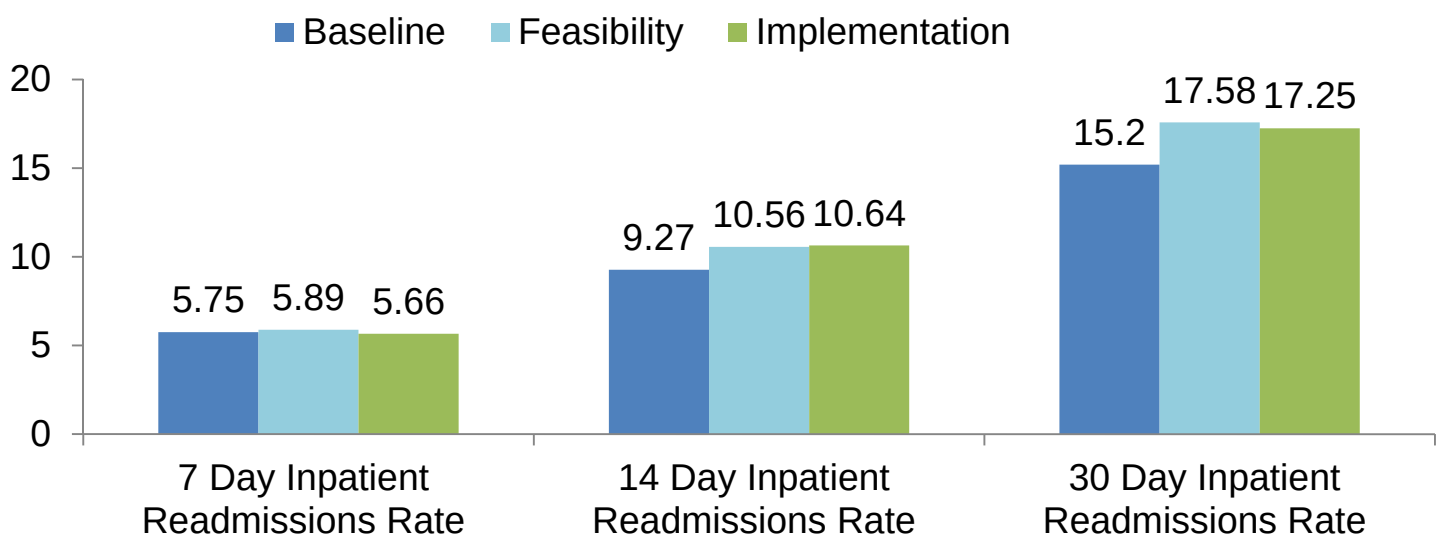
Key Findings:

# Preventable Inpatient Stays

- Preventable inpatient readmission rates decreased during implementation.

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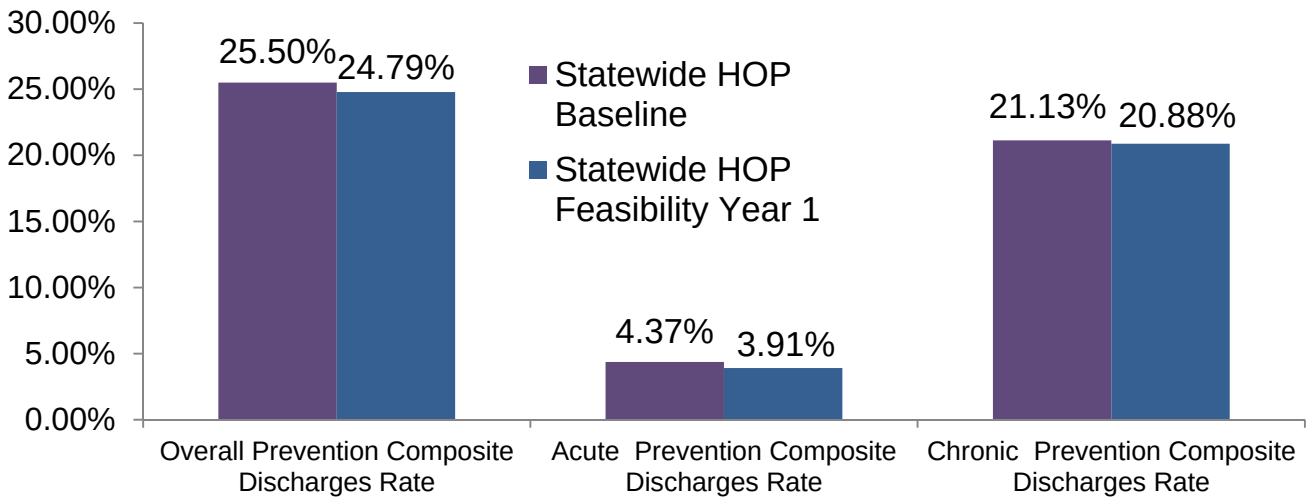
Key Findings:

# Preventable Inpatient Stays

- Lower overall (-0.71%, rel. change -2.78%), acute (-0.46%, rel. change -10.53%), and chronic preventable inpatient stay rates (-0.25%, rel. change -1.18%).
- Average overall and chronic prevention composite visits and monthly overall and acute prevention composite visits also decreased.
- Significant differences in favor of the HOP participants existed for the overall (p<.001) and acute (p = 0.011) prevention composite rates.

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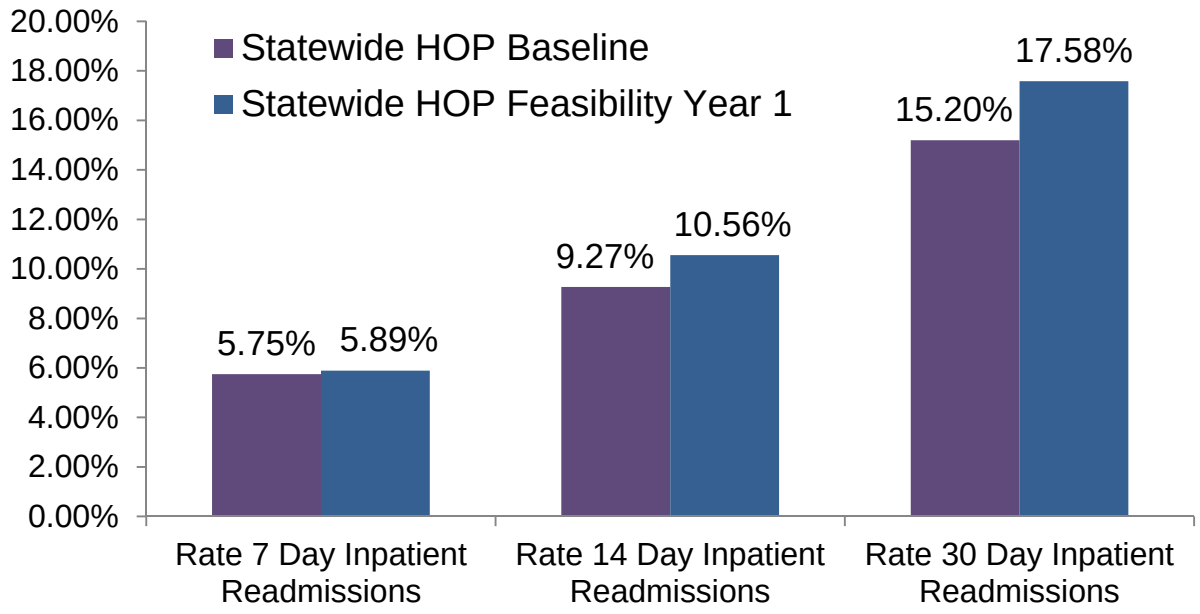
Initial Areas for Improvement:

# Preventable Inpatient Stays

- Average inpatient visits, patients with 2+ discharges inpatient Average visits, Average acute prevention composite visits, monthly chronic prevention composite visits rate, and 7-, 14-, and 30-day readmission rates
- The increases in all three readmission rates were statistically significant compared to the matched comparison group (p <.001).

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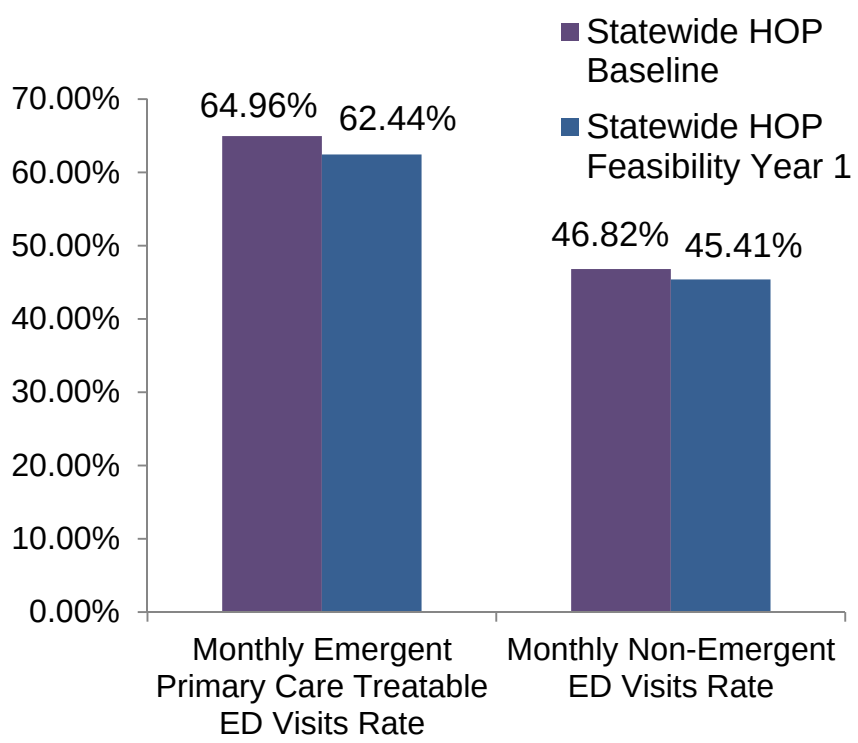
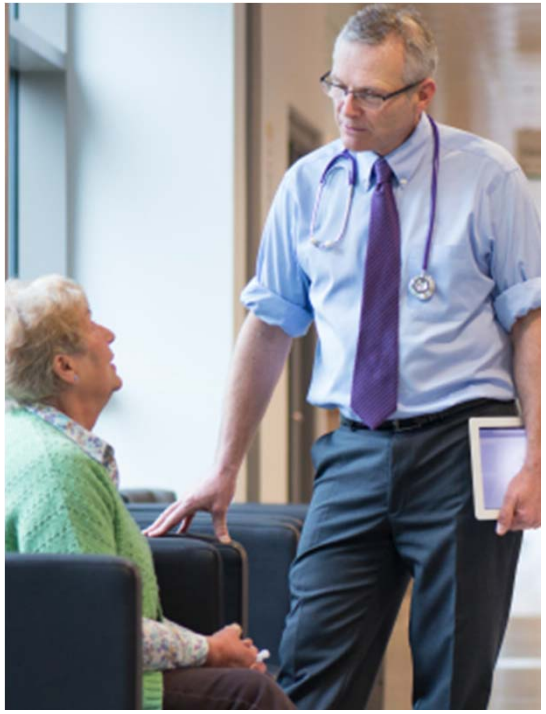
# Key Findings:
# **ED Stays**

- HOP participants had lower monthly emergent primary care treatable (-2.51%, rel. change -3.87%) and non-emergent ED visits (-1.41%, rel. change -3.02%)



Initial Areas for Improvement:

# ED Stays

- With the exception of the two monthly measured presented on the previous slide, all the ED measures increased between Baseline Year and Feasibility Year 1 for the HOP participants. [Again, this was not surprising given that HOP recruited patients with high ED utilization.]
- For HOP participants, the increases in Average overall ED visits ($p = 0.001$) and Average alcohol ED visits (0.006) were statistically significant compared to the matched comparison group. For the Average injury ER visits, Statewide HOP did not show a significant change, but the comparison group actually had a significant decrease ($p = 0.012$).
- Our preliminary cost analysis revealed that reducing these three measures would equal at least a cost savings of .04 standard deviations of the total cost for services rendered.

# PHASE II: COMPARISON OF FEASIBILITY YEAR (FY14) TO IMPLEMENTATION YEAR 1 TO DATE (FY15) [PRELIMINARY RESULTS]

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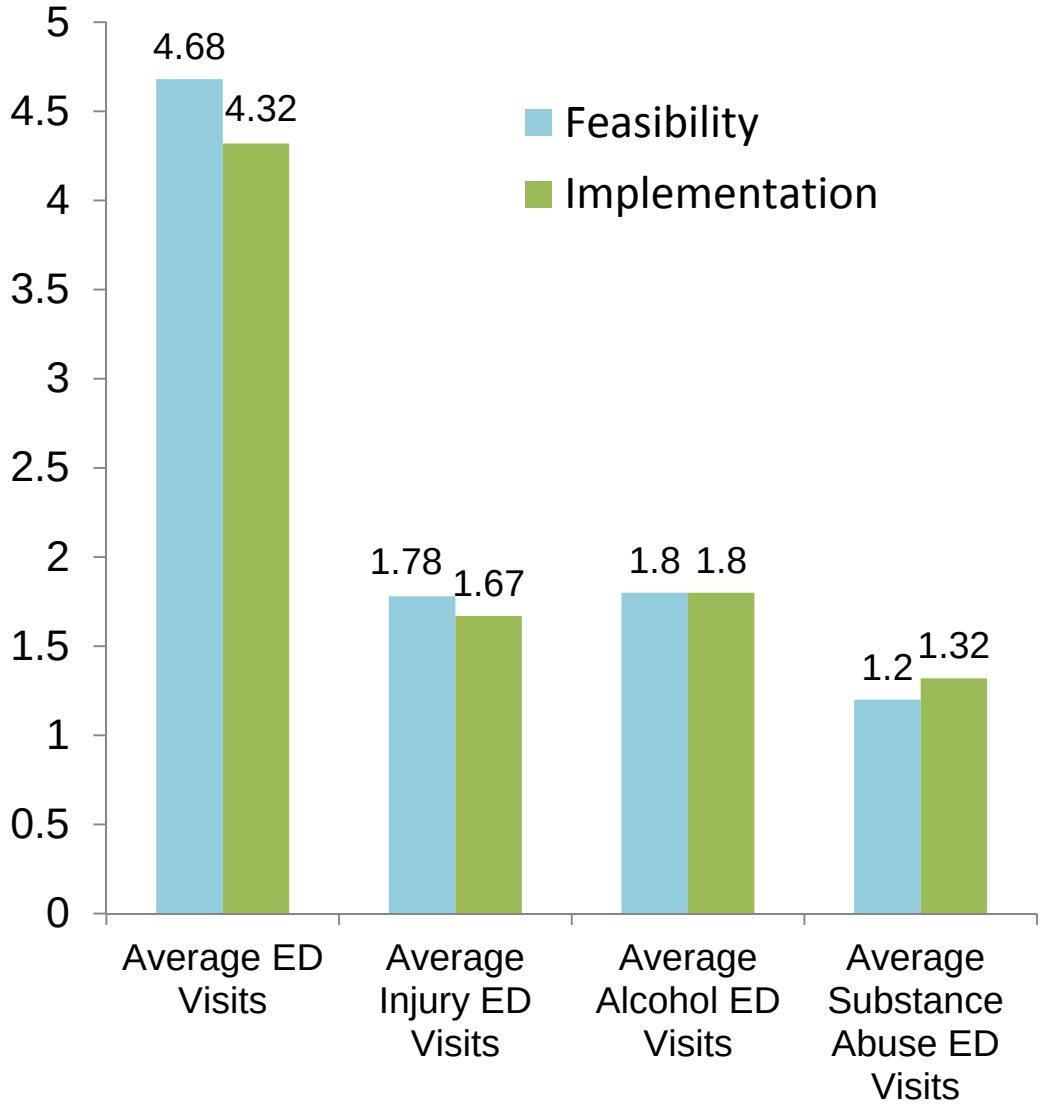
# Key Findings: **Decrease in ED Visits**

- Overall decrease in 12 of 17 measures associated with ED visits during implementation Year.
- It is estimated that a decrease in average overall, injury, and alcohol ED visits would result in measurable cost savings — $40 for every $1,000 charged.

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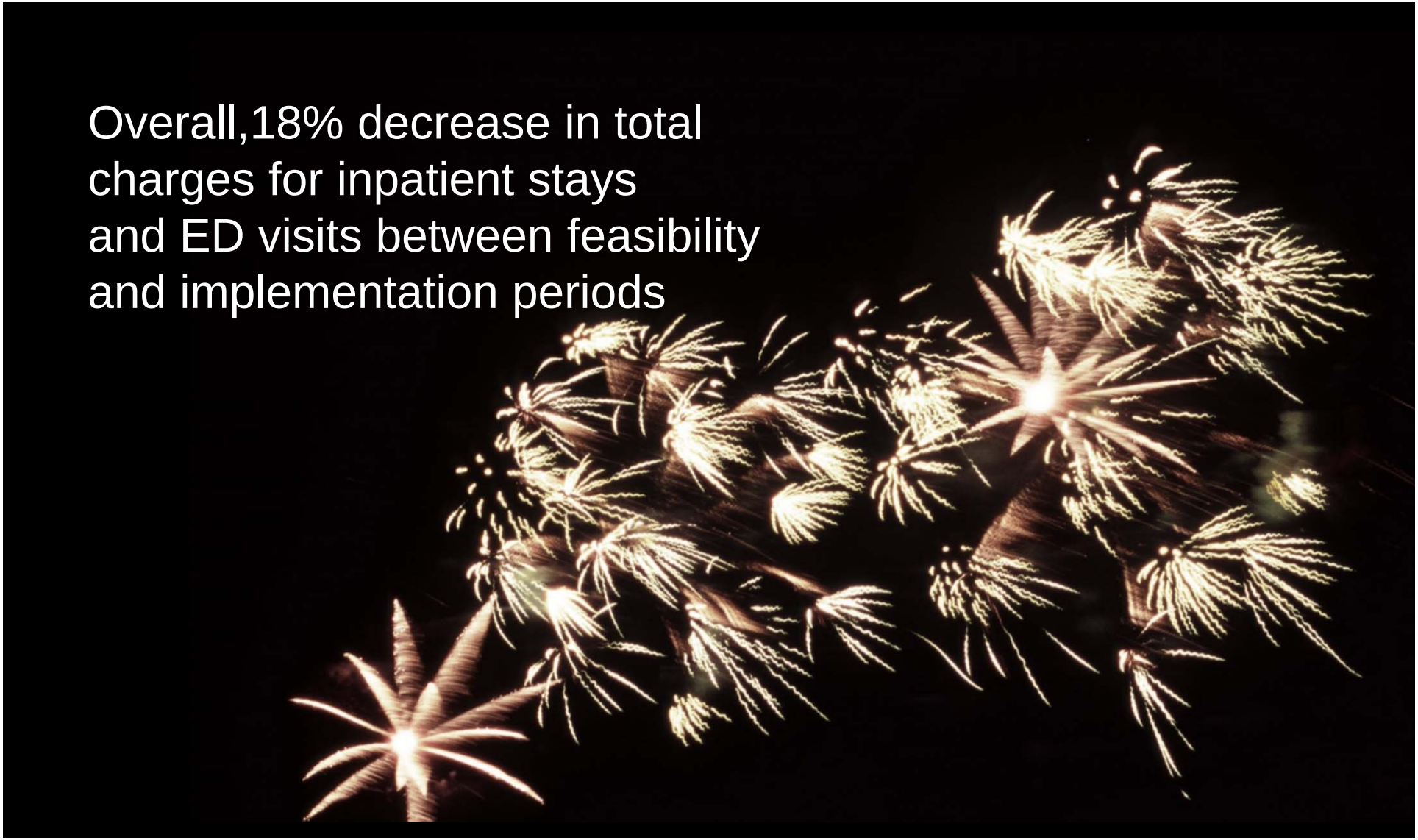

Overall,18% decrease in total charges for inpatient stays and ED visits between feasibility and implementation periods

| Measure | Feasibility Year 1 | Implementation Year 1 | Difference | Relative Change |
|---|---|---|---|---|
| Total Charges | $66,793,561 | $54,817,923 | -$11,975,638 | -17.93% |

# Overall Inpatient and ED Findings

- The number of measures with a relative decrease increased from 9 to 20 with the greatest impact seen for preventable inpatient stays.
- Our initial cost savings analysis predicted that a reduction in average total, alcohol, and injury ED visits would result in measurable cost savings. Two of these measures (total and injury visits) did decrease.
- Further cost analyses once FY 15 claims data close with a matched comparison group will be necessary to confirm.

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# “Does Care Plan Make a Difference on Inpatient and ED Measures? Total Charges?”

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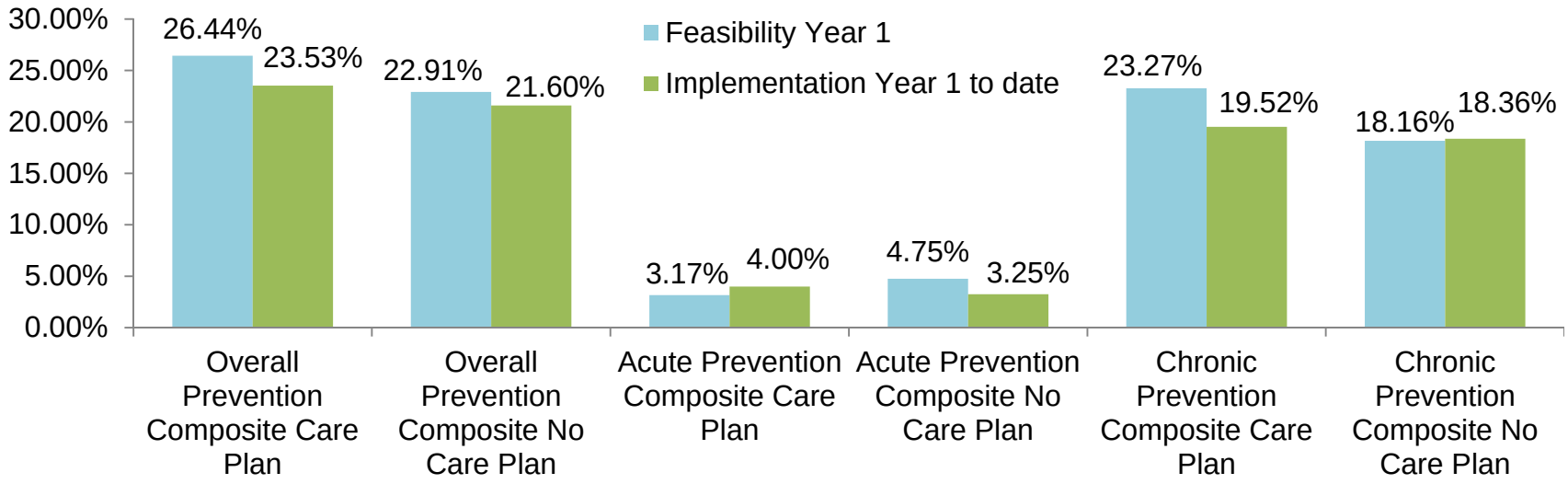
Key Findings:

# Preventable Inpatient Stays (Care Plan)

- Having a care plan made the biggest difference for inpatient stays that could have been prevented by coordinating care for patients with diabetes, COPD, asthma, hypertension, congestive heart failure, and angina without procedure (chronic prevention composite rate). For patients with a care plan, this measure had the largest relative decrease (-16.12%) of any measure, but for patients without a care plan there was a 1.10% relative increase.

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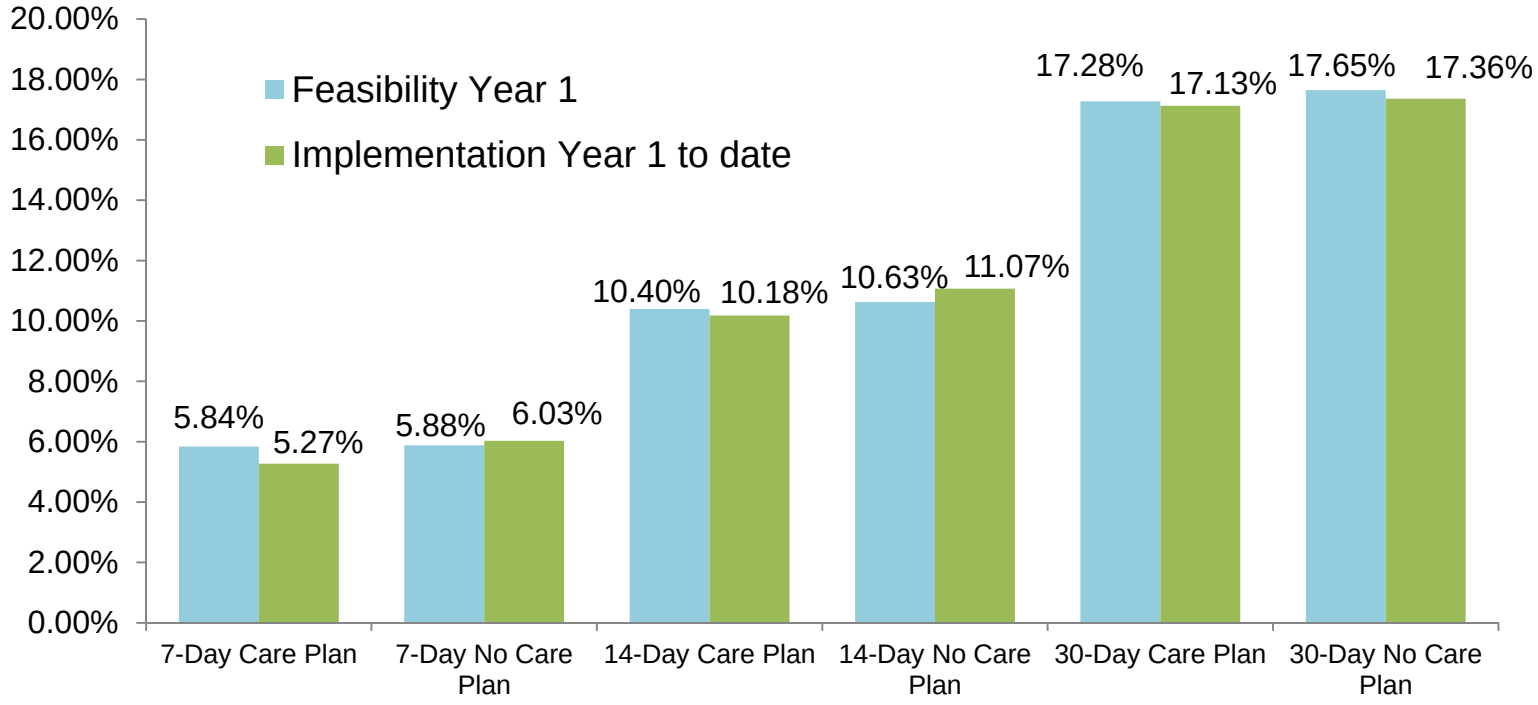
Key Findings:

# Inpatient Readmissions (Care Plan)

- All three inpatient readmission rates decreased for patients with a care plan.

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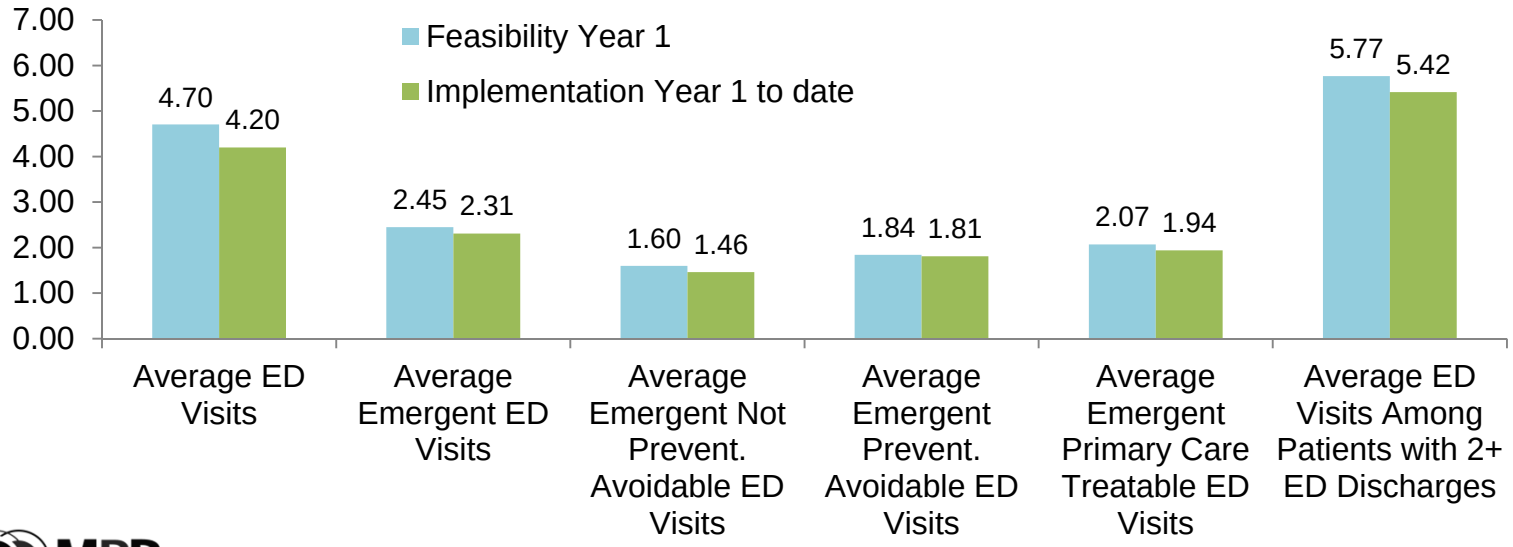
# Key Findings:
# **ED Stays (Care Plan)**

- 9 of the 12 average ED measures decreased for patients with a care plan: total, emergent, emergent not preventable avoidable, emergent preventable avoidable, emergent primary care treatable, patients with 2+ discharges.
- The only average measures that did not decrease were the unclassified, substance abuse, and alcohol visits. The monthly emergent ED visits rate and monthly emergent primary care treatable ED visits rate also increased.

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# Overall Key Findings: Care Plan

- For 16 measures tracked by the Initiative, HOP patients enrolled for at least six months with a care plan saw a greater relative decrease than HOP patients without a care plan.

- As expected, the care plan made the biggest difference for inpatient stays related to chronic conditions. This may be why there was also a greater decrease of 7- and 14-day inpatient readmissions rates and average primary care treatable ED visits.

- There was also an 11.01% relative decrease in overall preventable inpatient stays for patients with a care plan.

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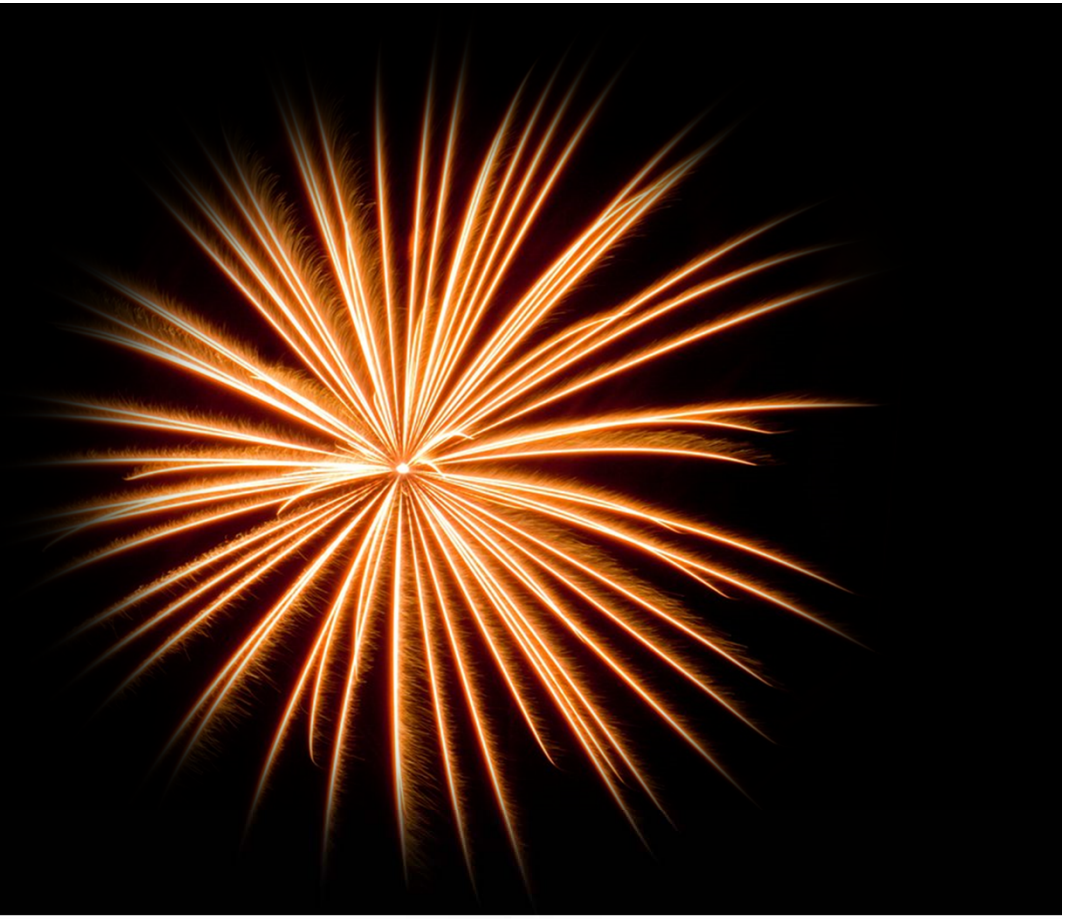
# HOP Care Plan Impacts on Total Cost Charges



| | Care Plan Status | Feasibility | Implementation | Difference | Relative Change |
|---|---|---|---|---|---|
| **Total Charges** | Plan | $35,489,471 | $28,419,689 | ($7,069,782) | -19.92% |
| | No Plan | $31,304,090 | $26,398,234 | ($4,905,856) | -15.67% |

# EVALUATION QUESTIONS

"How does participation in HOP result in greater program alignment to meet the needs of uninsured? [GAIN-SS]"

"How does participation in HOP increase consumer engagement? [PAM]"

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# PAM and GAIN-SS Samples

- As of March, 2014, during Feasibility Year 1, 3,201 patients had been screened with PAM and 3,317 had been screened with GAIN-SS, which represented 38% and 39% of active members, respectively.

- Due to increased enrollment in HOP and improved HOP implementation during Implementation Year 1, by the end of February, 2015, screening had more than doubled with 8,377 PAM patients and 9,005 GAIN-SS patients.

- 90% of active HOP members had been administered the PAM, and 97% had been administered the GAIN-SS.

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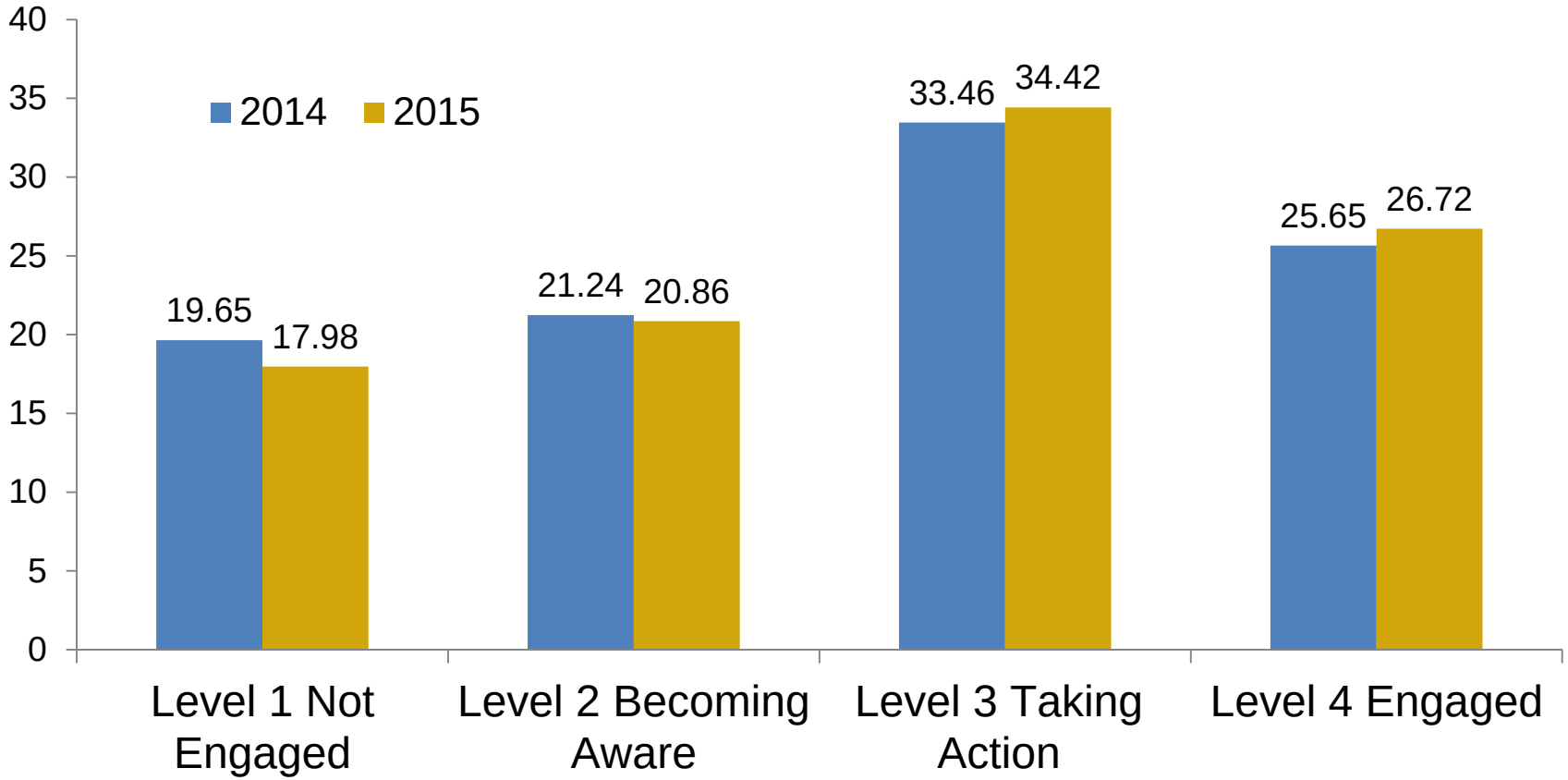
# Statewide HOP PAM Results: Percentage by PAM Level

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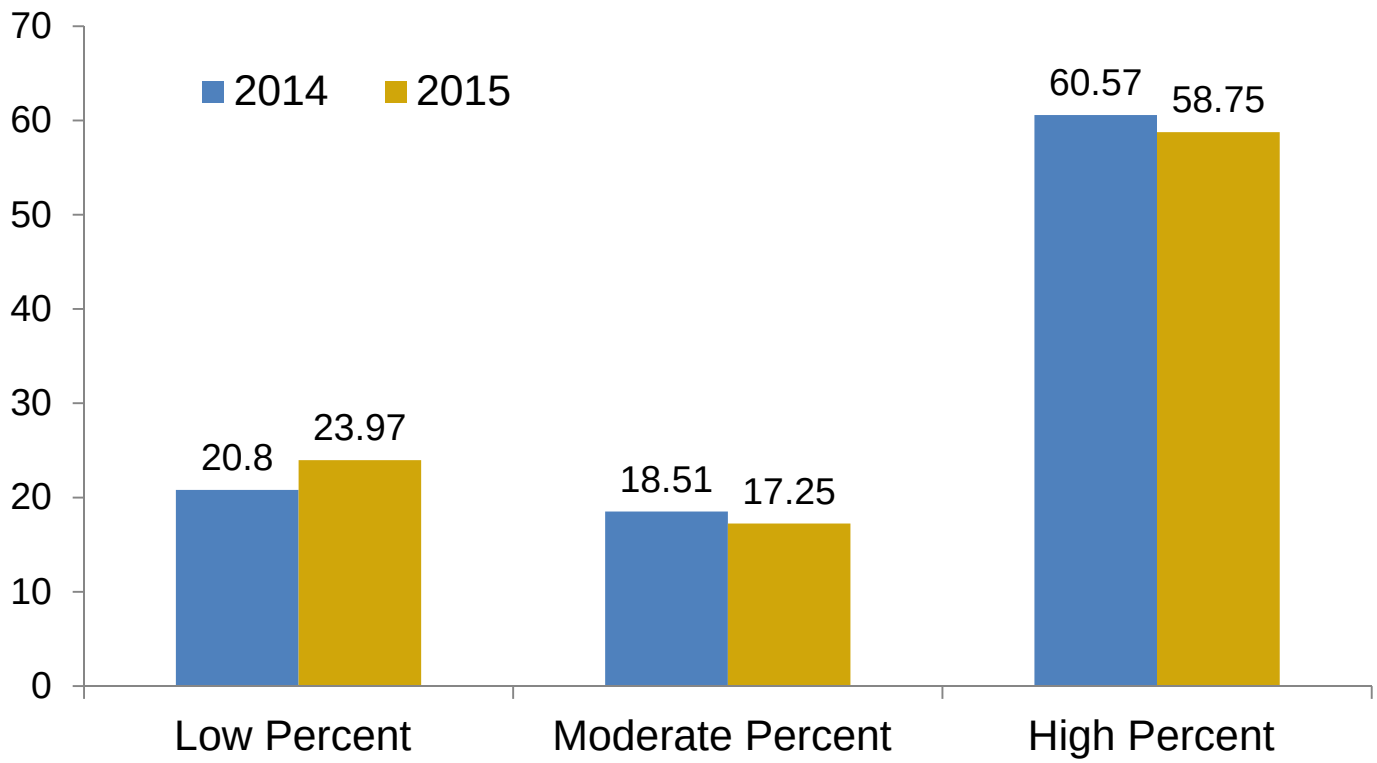
# Statewide HOP GAIN-SS Results

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# Statewide HOP GAIN-SS Subscreen Results

| **Subscreen and Risk Level** | Feb. 2014 | Feb. 2015 | Difference | Relative Change |
|---|---|---|---|---|
| | | | | |
| Low Risk | 84.38% | 84.92% | 0.54% | 0.64% |
| Moderate Risk | 14.14% | 13.74% | -0.40% | -2.83% |
| High Risk | 1.39% | 1.30% | -0.09% | -6.47% |
| **Externalizing Disorder Subscreen** | | | | |
| Low Risk | 54.18% | 55.41% | 1.23% | 2.27% |
| Moderate Risk | 26.98% | 25.43% | -1.55% | -5.74% |
| High Risk | 18.75% | 19.13% | 0.38% | 2.03% |
| **Internalizing Disorder Subscreen** | | | | |
| Low Risk | 25.23% | 28.22% | 2.99% | 11.85% |
| Moderate Risk | 24.27% | 22.24% | -2.03% | -8.36% |
| High Risk | 50.38% | 49.51% | -0.87% | -1.73% |
| **Substance Disorder Subscreen** | | | | |
| Low Risk | 72.41% | 73.88% | 1.47% | 2.03% |
| Moderate Risk | 18.63% | 18.13% | -0.50% | -2.68% |
| High Risk | 8.86% | 8.46% | -0.40% | -4.51% |

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# Statewide HOP PAM and GAIN-SS Implications and Next Steps

- Stability of population
- HOP patients are diverse in their readiness for patient engagement.
- Future reporting of PAM and GAIN-SS  consistent and timely
- High need for further assessment and referral for behavioral health – mental health and substance abuse

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# Acknowledgments

*"You can have data without information, but you cannot have information without data."* -- Daniel Keys Moran


- The HOP members who provided the data to frame this evaluation
- The external members of the Data Committee – SCHA and RFA
- Members of the HOP Vision Council for guidance
- The IFS, Division of Medicaid Policy Research and our colleagues at SCDHHS


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# Next Presentation Data Elements

- Collaborative Index
- Social and Cultural Determinants of Health
- Web Portal for Data Entry

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# Questions?

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