Appendix Exhibit A1: Measure Specifications

Measure 1: Closing the Referral Loop

Brief Description
Percentage of patients with referrals, regardless of age, for which the referring provider receives a report from the provider to whom the patient was referred.

Denominator
Number of patients, regardless of age, who were referred by any provider to a PRIME Entity specialty provider, and who had a visit with the PRIME Entity specialty care provider during the measurement period.

Denominator Exclusions
None

Numerator
Number of patients with a PRIME Entity specialty care referral, for which the referring provider received a report from the PRIME Entity specialty care provider to whom the patient was referred.

Numerator Exclusions
None

Measure 2: Laboratory monitoring for patients on warfarin

Brief Description
Percentage of individuals at least 18 years of age as of the beginning of the measurement period with at least 56 days of warfarin therapy who receive an International Normalized Ratio (INR) test during each 56-day interval with warfarin. Warfarin is a blood thinner, and INR is a lab value used to monitor how well the warfarin in thinning blood. The efficacy of warfarin is impacted by many factors and thus monitoring of its impact is warranted to ensure that the INR level is within the desirable range.

Denominator
Individuals at least 18 years of age as of the beginning of the measurement period with warfarin therapy for at least 56 days during the measurement period.

Denominator Exclusions
- Individuals who are monitoring INR at home
- Individuals who are in long-term care (LTC) during the measurement period

Numerator
The number of individuals in the denominator who have at least one INR monitoring test during each 56-day interval with active warfarin therapy

Numerator Exclusions
An interval with a hospitalization of more than 48 hours is considered an interval with an INR test.

Measure 3: Annual laboratory monitoring for patients on persistent medications

Brief Description
Percentage of individuals age 18 and older who received at least 180 treatment days of ambulatory medication therapy for select therapeutic agents during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year.

Denominator
Rate 1: Annual Monitoring for Individuals on ACE Inhibitors or ARBs
Individuals who received at least 180 treatment days of ACE inhibitors or ARBs, during the measurement year. Individuals may switch therapy with any included medication during the measurement year and have the day's supply for those medications count toward the total 180 treatment days (i.e., an individual who received 90 days of ACE inhibitors and 90 days of ARBs meets the denominator definition for rate 1).

Rate 2: Annual Monitoring for Individuals on Digoxin
Individuals who received at least 180 treatment days of digoxin during the measurement year.

Rate 3: Annual Monitoring for Individuals on Diuretics
Individuals who received at least 180 treatment days of a diuretic during the measurement year.

Denominator Exclusions
None

Numerator
Rate 1: Annual Monitoring for Individuals on ACE Inhibitors or ARBs
At least one serum potassium and a serum creatinine therapeutic monitoring test in the measurement year.

Rate 2: Annual Monitoring for Individuals on Digoxin
At least one serum potassium, at least one serum creatinine, and at least one serum digoxin therapeutic monitoring test in the measurement year.

Rate 3: Annual Monitoring for Individuals on Diuretics
At least one serum potassium and a serum creatinine therapeutic monitoring test in the measurement period. Any of the following during the measurement period meet criteria:

Numerator Exclusions
Exclude individuals from each eligible population rate who had an inpatient (acute or non-acute) claim/ encounter during the measurement period.

Measure 4: Timely follow-up of abnormal INR

Brief Description
For patients 18+ years who receive warfarin therapy for at least 56 days, at least one INR monitoring test during each 56-day interval with active warfarin therapy, and follow-up appropriate to the result. INR levels that are too high / low can be dangerous to patients by increasing bleeding or clotting risk.

Denominator
The number of INR's in the ambulatory setting for individuals at least 18 years old at the beginning of the measurement period with warfarin therapy for at least 56 days during the measurement period and who have at least one INR monitoring test during each 56-day interval with active warfarin therapy.

Denominator Exclusions
- Individuals monitoring INR at home or in long-term care during the measurement period.
- INR tests ordered from the emergency department or inpatient setting.
- INR tests ordered from urgent care settings that are located within an emergency department

Numerator
Number of denominator INR's that have had appropriate follow-up as per the following:

- INR < 2 → follow up with a new lab in 4 weeks
- INR 2-3.5→No lab follow-up
- INR > 3.5 and <4.9 →follow up with a new lab in 10 days
- INR >4.9 →Documented as a critical lab value and that the ordering clinician (or responsible delegate) has been informed within 24 hours

Numerator Exclusions
None

Measure 5: Timely follow-up of abnormal potassium

Brief Description
This measure assesses the percentage of ambulatory serum potassium tests performed on patients at least 18 years old who received at least 180 treatment days of ACE, ARB or Diuretic therapy during the measurement year, at least one potassium monitoring event and follow-up appropriate to the results of that potassium monitoring event. ACE, ARB, and diuretics are medications that can impact potassium levels. A potassium level that is too low or too high can be dangerous by affecting heart function.

Denominator
The number of serum potassium tests completed in the ambulatory setting during the measurement year in patients age 18 and older, as of the end of the measurement period, who are on selected persistent medications (ACE Inhibitors/ARB or Diuretics) for at least 180 days.

Denominator Exclusions
- Tests ordered from the emergency department or inpatient setting.
- Tests ordered from urgent care settings that are located within an emergency department

Numerator
Number of denominator serum Potassium tests that have had appropriate follow-up, as per the following:

- Potassium 3.5 – 5.1→ Normal range, no lab follow-up
- Potassium ≥3 and <3.5 → Follow up lab in 4 weeks
- Potassium ≥5.2 and < 6 → Follow up lab in 10 days
- Potassium <3 or ≥6 → Documented as a critical lab value and that the ordering clinician (or responsible delegate) has been informed within 24 hours

Numerator Exclusions None

Measure 6: Follow-up of abnormal FIT

Brief Description
This measure assesses if patients receive a follow-up colonoscopy after a positive stool-based colon cancer screening test (FIT or FOBT). Abnormal results for these tests warrant a colonoscopy to determine if colon cancer is present.

Denominator
Total number of individuals 51-75 years of age with a positive FIT/FOBT during the first six months of the measurement period.

Denominator Exclusions
None

Numerator
Number of individuals in the PRIME Project Target Population 51-75 years of age receiving a colonoscopy within 6 months of the date of the positive stool test. Measurement period for numerator is all 12 months of the measurement period.

Numerator Exclusions
None

Measure 7: Timely biopsy of high-risk abnormal mammogram

Brief Description
Timely follow-up after abnormal mammogram to ensure timely diagnosis of breast cancer

Denominator
Total number of individuals in the eligible population who received either a screening or diagnostic mammogram by the public health system during the measurement year that was assessed as a BIRADS 4 or 5.

Denominator Exclusions
None

Numerator
Number of individual in the denominator for whom a breast biopsy was performed within 14 business days of the result date of a screening or diagnostic mammogram being given a BIRADS 4 or 5; includes mammograms and biopsies ordered by the system that have been outsourced

Numerator Exclusions
- When the patient is offered, but declines to make an appointment in 14 business days (i.e. vacation, going out of the country, personal reasons, deceased, getting care at another facility, incarcerated). This must be documented in the mammogram report. This documentation may occur on the date of report. If the information is obtained later, the delay should be documented as an addendum to the report of a BIRADS 4 or 5.
- When the patient is refusing an imaging guided biopsy. This must be documented in the diagnostic mammogram report.
- When the doctor requests a delayed biopsy because other treatments take priority (i.e. chemotherapy or other medical treatments planned). This should be documented in addendum or report

Appendix Exhibit A2

Traits of Participating Healthcare System

Healthcare System	Comprehensive Electronic Health Record	Number of Outpatients [a]	State-Funded	Reported Measure 1	Reported Measures 2 - 5	Reported Measures 6 & 7
A	X	> 100,000	X	X	X	
B	X	> 100,000		X	X	
C	X	80 - 100,000		X		X
D	X	60 - 80,000	X	X		
E	X	40 - 60,000	X	X		X
F	X	20 - 40,000	X	X		
G	X [b]	20 - 40,000		X		
H	X [b]	< 20,000		X		
I	X	< 20,000	X	X	X	
J		> 100,000		X	X	X
K		80 - 100,000		X		
L		40 - 60,000		X		
M		40 - 60,000		X		
N		40 - 60,000		X		
O		40 - 60,000		X		X
P		20 - 40,000		X	X	
Q		20 - 40,000		X		X

[a] PRIME eligible population at end of second year (June 30 2017)

[b] Locally-developed system

Appendix Exhibit A3

Performance on Closing the Referral Loop (n = 17)

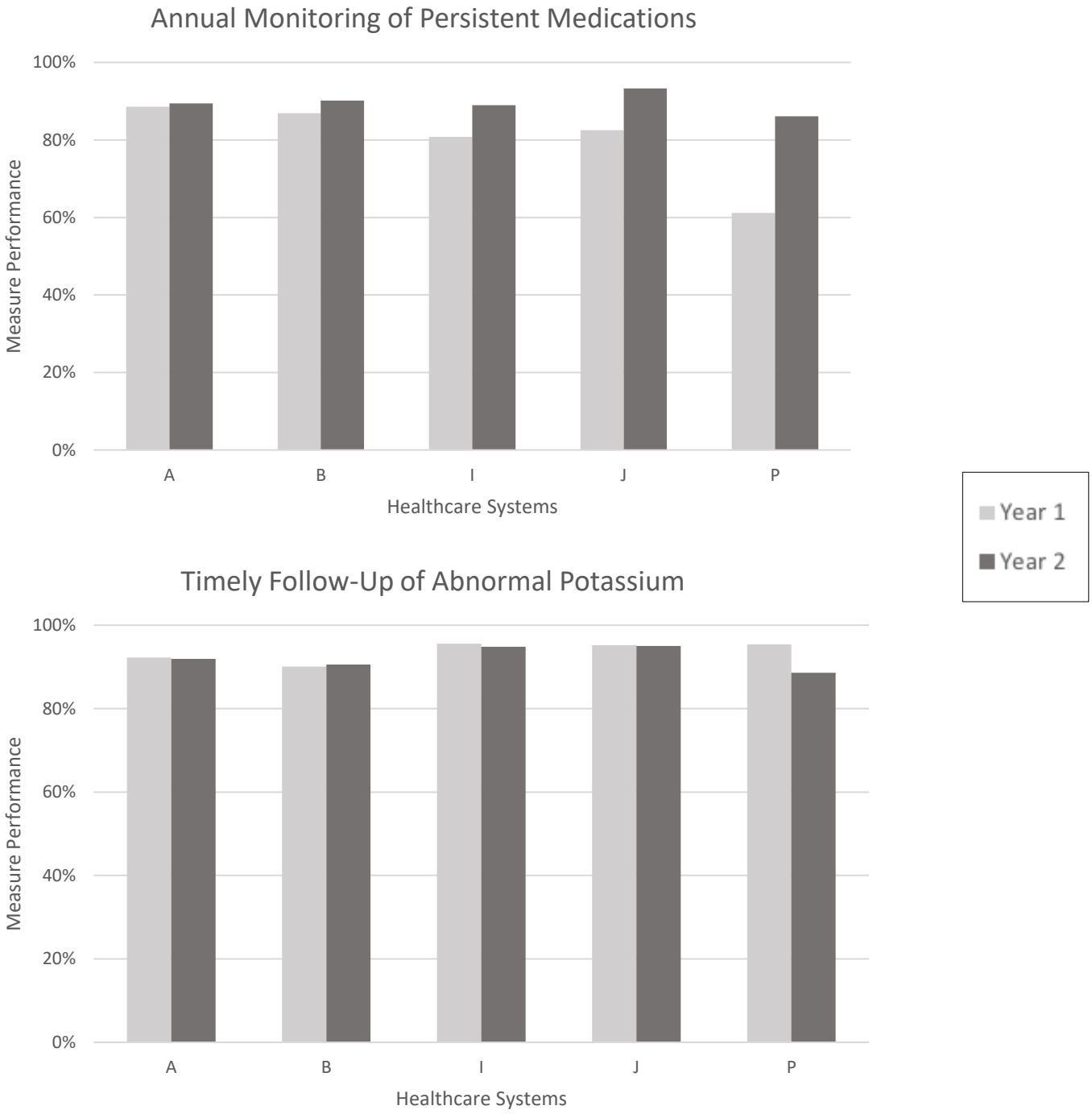
Healthcare System	Performance in Year 1	Performance in Year 2	Change from Year 1 to Year 2
A	98%	99%	0%
B	21%	19%	- 1%
C	100%	100%	0%
D	8%	73%	+ 65% *
E	86%	81%	- 5%
F	75%	72%	- 3%
G [a]	--	14%	--
H [a]	96%	93%	- 3%
I	83%	93%	+ 9%
J [b]	88%	74%	- 14%
K [b]	100%	17%	- 83% *
L [b]	28%	75%	+ 47%*
M [b]	19%	98%	+ 79%*
N [b]	45%	64%	+ 19%
O [b]	100%	100%	0%
P [b]	--	100%	--
Q [b]	20%	76%	+ 56%*
All systems: median (MAD [c])	83% (17%)	76% (17%)	0% (10%)

Source: Authors' analysis of data provided by the California Department of Health Care Services

Notes:
[a] Systems used a locally-developed non-commercial electronic health record
[b] Systems that did not use a comprehensive electronic health record system
[c] Median absolute deviation (MAD): measure of spread around the median
* Change more than 2.5 median absolute deviations from median change and at least 20%

Appendix Exhibit A4

Performance on Annual Monitoring of Persistent Medications & Follow-Up of Abnormal Potassium (n = 5)



Source: Authors' analysis of data provided by the California Department of Health Care Services
Notes: These are optional measures reported by only these five systems. Systems A, B, and I used comprehensive EHR systems. System P reported change of at least 20% and more than 2.5 median absolute deviations from median change for annual monitoring of persistent medications.

Appendix Exhibit A5

Performance on Medication Safety & Follow-Up of High-Acuity Abnormal Test Follow-Up (n = 5)

Healthcare System	Measure 2: Warfarin Monitoring			Measure 3: Annual Monitoring of Persistent Medications		
	Performance in Year 1	Performance in Year 2	Change from Year 1 to Year 2	Performance in Year 1	Performance in Year 2	Change from Year 1 to Year 2
A	51%	60%	+ 9%	89%	89%	+ 1%
B	79%	78%	- 1%	87%	90%	+ 3%
I	37%	33%	- 4%	81%	89%	+ 8%
J [a]	61%	88%	+ 27%	53%	93%	+ 11%
P [a]	37%	66%	+ 29%	61%	86%	+ 25% *
All systems: median (MAD [b])	51% (14%)	66% (12%)	+ 9% (13%)	83% (8%)	89% (1%)	+ 8% (5%)
	Measure 4: Timely Follow-Up of Abnormal INR			**Measure 5: Timely Follow-Up of Abnormal Potassium**		
	Performance in Year 1	Performance in Year 2	Change from Year 1 to Year 2	Performance in Year 1	Performance in Year 2	Change from Year 1 to Year 2
A	92%	94%	+ 2%	92%	92%	0%
B	95%	95%	0%	90%	90%	0%
I	80%	64%	- 16%	96%	95%	- 1%
J [a]	94%	94%	0%	95%	95%	0%
P [a]	70%	48%	- 21% *	95%	89%	- 7%
All systems: median (MAD [b])	92% (3%)	94% (1%)	0% (2%)	95% (1%)	92% (3%)	0% (0%)

Source: Authors' analysis of data provided by the California Department of Health Care Services

Notes: These are optional measures reported by only these five systems.
[a] Systems that did not use a comprehensive electronic health record system
[b] Median absolute deviation (MAD): measure of spread around the median
* Change more than 2.5 median absolute deviations from median change and at least 20%

Appendix Exhibit A6

Performance on Timely Diagnosis (n = 5)

Healthcare System	Measure 6: Timely Follow-Up of Abnormal FIT			Measure 7: Timely Biopsy of High-Risk Abnormal Mammogram		
	Performance in Year 1	Performance in Year 2	Change from Year 1 to Year 2	Performance in Year 1	Performance in Year 2	Change from Year 1 to Year 2
C	49%	49%	+ 1%	61%	86%	+ 25%
E	49%	36%	- 13%	41%	60%	+ 19%
J [a]	31%	34%	+ 3%	44%	48%	+ 4%
O [a]	50%	8%	- 42% *	65%	45%	- 20% *
Q [a]	--	50%	--	suppressed	23%	--
All systems: median (MAD [b])	49% (0.5%)	36% (13%)	- 6% (8%)	52% (10%)	47% (12%)	12% (11%)

Source: Authors' analysis of data provided by the California Department of Health Care Services

Notes: These are optional measures reported by only these five systems.
[a] Systems that did not use a comprehensive electronic health record system
[b] Median absolute deviation (MAD): measure of spread around the median
* Change more than 2.5 median absolute deviations from median change and at least 20%