APPENDIX B

Note: The documents included in this appendix provide historic information on development of HealthChoices rate ranges for both the CY 2018 and CY 2020 Agreement Years. The Department's actuary will develop rate ranges specific to the agreements that will result from this procurement. These will be separate efforts that do not rely on the work or data used for development of the documents included in this appendix.

Appendix B: Financial Data

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Appendix B: Average HealthChoices Rates

CY2018 Average Rates

The average rates are grouped into the following buckets: Temporary Assistance Needy Families/Modified Adjusted Gross Income ("TANF/MAGI"), Supplemental Security Income/Breast and Cervical Cancer ("SSI/BCC"), and adults ages 19 to 64 newly eligible due to Medicaid expansion ("Newly Eligible"). The TANF/MAGI includes all "Under Age 1" recipients.

These rates include amounts for APR payments that go to hospitals and for administrative expense related to the Gross Receipts Tax. The Department pays maternity kick payments. The cost is blended into these average rates.

The Department makes payments for the Health Insurance Providers Fee. The Department also has a Pay for Performance program. These amounts are not in this calculation.

Zone	TANF/MAGI	SSI/BCC	Newly Eligible
Southwest	$305.94	$1,038.82	$461.73
Southeast	$328.58	$1,333.73	$491.13
Lehigh/Capital	$288.33	$1,033.43	$468.18
Northeast	$259.66	$990.10	$416.88
Northwest	$275.20	$908.82	$414.02

Population – July 2019 Member Months

The Department anticipates that these populations may be relatively stable in the future. However, future enrollment can be uncertain and can be affected by changes in the economy, law and regulations, and policies.

Zone	TANF/MAGI	SSI/BCC	Newly Eligible	Grand Total
Southwest	233,707	80,557	148,780	463,044
Southeast	430,722	116,222	269,523	816,467
Lehigh/Capital	276,089	73,420	143,236	492,744
Northeast	169,614	46,432	100,704	316,750
Northwest	82,348	27,499	47,495	157,342
Grand Total	1,192,480	344,130	709,738	2,246,348

Note: Some numbers do not add due to rounding.

CY2020 HealthChoices Administrative and Underwriting Gain

The rates include amounts to cover MCOs' administrative costs as well as an underwriting gain. In developing the rate ranges, MCO administrative expenses are allocated across rate cells in two parts that reflect fixed and variable components. Therefore, the percentage of the rate that covers administrative costs and underwriting gain is different for each rate cell.

The rate ranges for each rate cell include a Mercer Estimate in addition to upper and lower bounds that account for differing levels of MCOs' efficiency and effectiveness in managing care, and uncertainty in future events. The aggregate percentage of each zone's CY 2020 rates that are for administrative costs and underwriting gain at the Mercer Estimate is shown in the table below:

Zone	Percentage
Southwest	9.62%
Southeast	11.60%
Lehigh/Capital	12.19%
Northeast	11.20%
Northwest	10.00%

CY2020 Databook

The following links provide access to the CY 2020 Databooks:

- [All Zones HealthChoices CY 2020 Contract Year - Databook](#)
- [All Zones HealthChoices CY 2020 Contract Year - Historical Data](#)

- This presentation provides an overview of the rate-setting methodology applicable to the HealthChoices Southeast (SE), Southwest (SW), Lehigh/Capital (LC), Northeast (NE) and Northwest (NW) zones.
- Please note that there are certain aspects of the rate development process that may not uniformly apply to all five HealthChoices zones. This presentation displays such occurrences on each slide, if necessary.

HEALTHCHOICES RATE-SETTING CONTINUUM

FFS Data

Basic Financial Reports

Advanced Financial and Operational Reports

Encounter Data
- Plan submitted encounter data
- Risk-adjusted rates

Eligibility Data
- DHS provided eligibility data

Ad Hoc Surveys and Data Requests

- As each HealthChoices zone has matured, the appropriateness of relying on historical fee-for-service (FFS) data has diminished, while relying on actual experience from the participating physical health managed care organizations (PH-MCOs) became more important. More specifically, PH-MCO encounter data takes a more predominant role in rate setting as it is used as the base data for developing prospective capitation rates.

- Encounter and eligibility data offer more complete information, less reliance on ad hoc data requests and provide the ability to make additional comparisons among PH-MCOs (including providing support for risk-adjusted rates).

- Risk-adjusted rates significantly improve the Department of Human Services' (DHS) ability to better match payment to risk by incorporating objective means of evaluating acuity/risk differences among the PH-MCOs in the HealthChoices zones.

- With input from the PH-MCOs, DHS staff has made a concerted effort to focus the HealthChoices financial reporting requirements (FRRs) on key areas.
- Quarterly reporting supports the Department's efforts to monitor the performance of each PH-MCO and provides regular updates to the accuracy of each report.
- Annual reports reduce the administrative burden on both the PH-MCOs and DHS staff by limiting the completion of the reports to once per year.
- Annual reports provide important data to augment the quarterly reports.
- The HealthChoices capitation rates are supported from the information contained in the audited financial reports and other available information.

RATE STRUCTURE

Rating Region

The HealthChoices Capitation Rates Were Developed for Each Rating Region Within a Zone

Maternity Care Payment

The Maternity Care Payment Accounts for Expenses Related to the Mother for Three Months Prior to Delivery and the Delivery Event

Rate Cells

There are Four Traditional Rate Cells and Two Adult Expansion Rate Cells Plus the Maternity Care Payment

Under Age 1
TANF-MAGI Ages 1 to 20
TANF-MAGI Ages 21+
Disabled BCC Ages 1+
Newly Eligible Ages 19 to 44
Newly Eligible Ages 45 to 64

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- The HealthChoices capitation rates were developed for each rating region within a zone.

- The Maternity Care Payment is intended to be a lump-sum payment to account for the expenses related to the mother for three months prior to delivery and the delivery event. No newborn expense is included in the Maternity Care Payment.

- Encounter data allows for changes in rate cells to be effectuated in how the data is queried.

RISK MITIGATION

Better Match Payment to Risk

- Risk-Adjusted Rates
- Home Nursing (HN) Risk Sharing (HNRS)
- High Cost Risk Pool (HCRP)
- Under Age 1 Risk Sharing
- Specialty Drug Risk Sharing (SDRS)
- Home Accessibility DME Risk Sharing

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- Risk adjustment better matches payment to risk compared to traditional rate setting alone by considering acuity and risk selection among the PH-MCOs in each region, respectively. Risk adjustment will not be applied to the Maternity Care Payment or the Under Age 1 rate cell.
- The HNRS program addresses the adverse risk of a small number of high-cost users of HN services. More details are provided in later slides.
- The HCRP addresses selection concerns by withholding a percentage of the capitation payments, setting the funds aside into a pool, and later distributing that pool among the PH-MCOs. More details are provided in later slides.
- Beginning in CY 2018, recipients under age 1 will no longer be included in the HCRP or the HNRS program. Instead, a new rate cell has been created (Under Age 1) for all children under age 1. A risk-sharing arrangement has been developed for this specific rate cell addressing the adverse risk of a small number of high-cost infants.
- The SDRS arrangement addresses the adverse risk of a small number of cystic fibrosis drug users. More details are provided in later slides.
- The Home Accessibility DME Risk Sharing arrangement mitigates the risk of potentially volatile expenses from users of medically necessary mobility equipment plus basic installation costs. More details are provided in later slides.

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BASE DATA FOR DEVELOPING RATES

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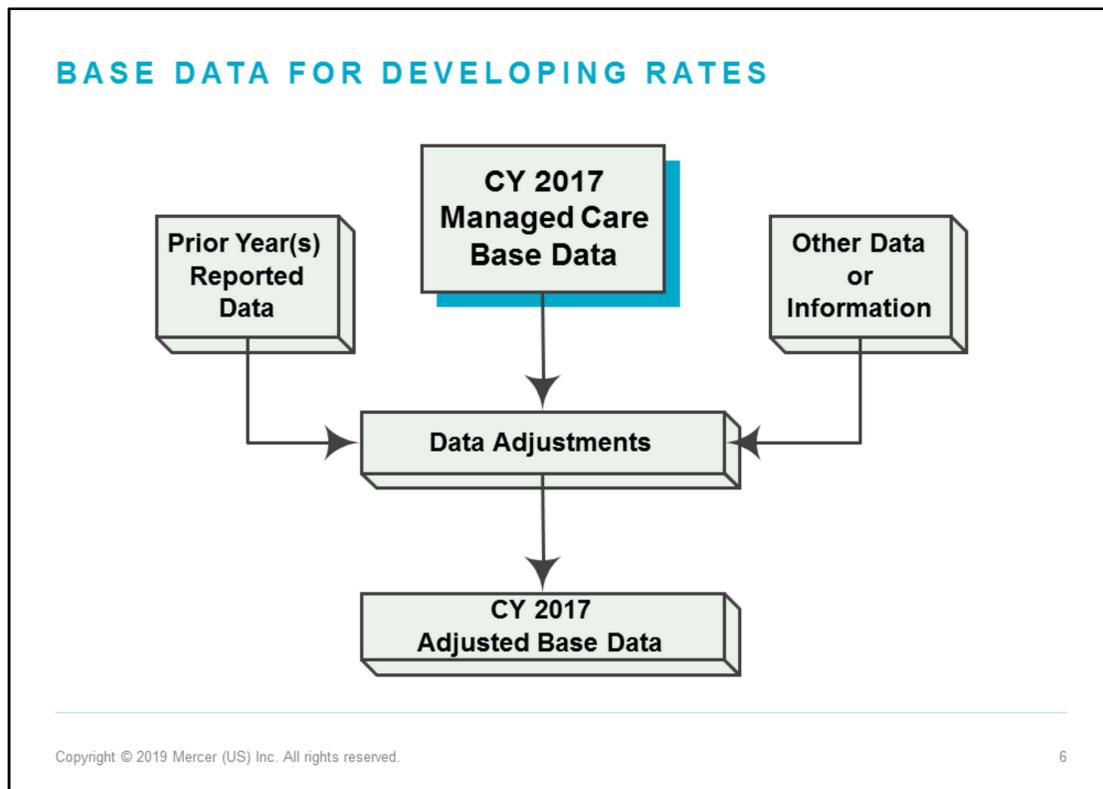
- The basis of the HealthChoices capitation rates is the PH-MCOs' submitted encounter data with support of the financial data reported through the Commonwealth's FRRs.
- For the most part, the FRRs mirror the rating structure of the HealthChoices program — separate reports for each rate cell and region. Because of the detail it contains, the encounter data is more flexible in how it can be queried.
- Although comprehensive in nature, the encounters and FRRs do not always provide sufficient information on certain issues considered in a particular year's rate-setting process. Therefore, Mercer may use information from previous years, the Department's FFS program, other states' data or other proprietary information to assist in the rate development process.
- The reported experience from each PH-MCO reflects the management and accounting policies and practices thereof. These may generate expenses that do not reflect: (i) the risk of an efficient and effective PH-MCO or (ii) the Department's participation intentions within the HealthChoices program. Adjustments may therefore be needed.

ADJUSTMENT TO BASE DATA

Comparison Among Health Plans

Comparison Between Encounters and Financial Reported Data

Prudent Purchaser of Health Care Services

- The Commonwealth actively seeks improvement to the HealthChoices program in the areas of efficiency and effectiveness
- Adjustments were made to historical base data to reflect the Commonwealth's value-focused purchasing objective

Reasonable and Appropriate

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- To ensure that DHS and CMS are appropriately using the public resources available to fund the HealthChoices program, Mercer reviews the encounter base data, as submitted by the PH-MCOs, to determine if adjustments are needed to ensure that the cost of the HealthChoices program is reasonable and appropriate.

- These adjustments may increase or decrease the base data and can be PH-MCO-specific or more global in nature.

- Specific managed care practices can affect reported experience. The following are key issues that Mercer considers for adjustments: incurred-but-not-reported (IBNR) claims liability, medical management, third-party liability/coordination of benefits (TPL/COB), provider contracting, credibility of the data (relational modeling) and non-state plan services. For example, if a particular PH-MCO is not taking advantage of third-party payers, their reported experience will be inflated. DHS and CMS, as prudent purchasers of health care, should not support this practice. Thus, an adjustment to the PH-MCOs' experience may be necessary.

- Through targeted and comparative analyses and Mercer's experience in Medicaid managed care programs, Mercer and DHS identify opportunities for improved managed care effectiveness in areas such as preventable inpatient acute admissions, pre-emptible emergency department visits and improved pharmacy management. These adjustments were made to the base data to better reflect the Commonwealth's value-focused purchasing objectives.
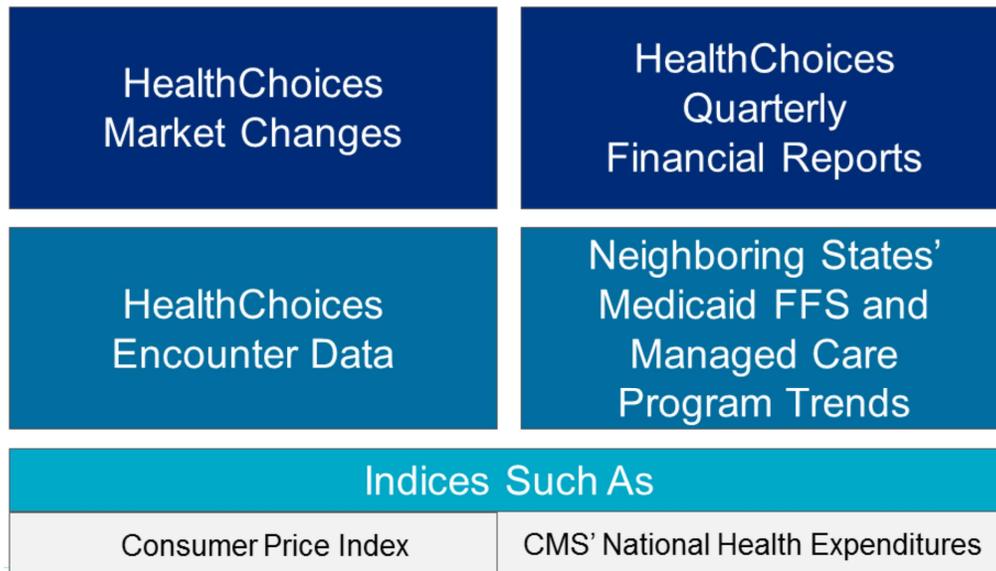
RATE DEVELOPMENT

CY 2017 Adjusted Base Data
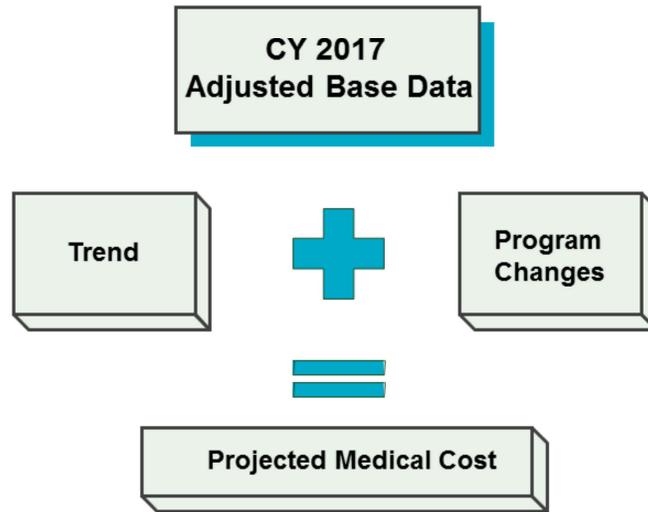
Trend + Program Changes

= Projected Medical Cost

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- The main components in developing the projected medical costs are adjusted base data, trend and program changes.
- Trend is an estimate of the change in costs and utilization of services from the base period to the rating period.
- Mercer develops trend estimates for categories of service and rate cells by reviewing a variety of data sources. For example, disabled populations may have higher trends than non-disabled populations.
- Many factors can influence trends, including effective medical management (i.e., utilization, care, and disease management), efficient contracting with providers, appropriate provider use (i.e., not sending all members in need of a tonsillectomy to an academic medical center), generic substitutions in pharmacy, widespread use of less costly preventive services and member education.
- Program changes that may materially impact the HealthChoices program, and are not reflected in the base year data, are reviewed and discussed with the Commonwealth regarding their impact on the capitation rate-setting process. These adjustments include, but may not be limited to:
  - Appendices 14, 16, 16a, 17
  - Inpatient Pricing Adjustment
  - Assessments
  - Enrollment Changes:
    - Transitional Medical Assistance
    - Institution for Mental Diseases
    - Community HealthChoices
    - Continuous Enrollment
  - Shift Nursing Fee Increase
  - Ambulance Reimbursement
  - Treat Not Transport
  - Opioid Centers of Excellence
  - Patient Centered Medical Homes
  - DME Home Accessibility
  - Health Insurance Providers Fee (HIPF)
  - Uniform Statewide PDL

RATE DEVELOPMENT TREND SOURCES

| HealthChoices Market Changes | HealthChoices Quarterly Financial Reports |
| HealthChoices Encounter Data | Neighboring States' Medicaid FFS and Managed Care Program Trends |

Indices Such As

| Consumer Price Index | CMS' National Health Expenditures |

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- Mercer considers several different sources of information to develop trend estimates specifically for the HealthChoices program.
- Mercer develops trends that are reasonable and appropriate for the services provided, the population covered, the risk incurred and the medical management practice patterns for the HealthChoices program.
- General and specific health economic indices provide a national perspective on health care trends.
- The PH-MCOs' reported experience provides more HealthChoices-specific trend information. This information reflects the management practices of the HealthChoices program by each PH-MCO. As a result, Mercer will see varying trends in the historical HealthChoices experience.
- Mercer's proprietary information of other state Medicaid programs provides additional perspectives on health care trends.
- As needed, FFS trend information provides a comparison to assess the effectiveness of the managed care program.

- Hospital trends continue to play a significant role in the cost of delivering health care, whether it is the commercial or public health care arena.
- Every PH-MCO should actively manage the care of its enrolled members through tools such as: appropriate utilization management, discharge planning, network management, member education and preventive services, to ensure that HealthChoices is efficiently and effectively managed.

PHARMACY TREND

HealthChoices Encounter Data	Reported Financial Data

Mercer's Team of Dedicated Pharmacy Specialists

Pharmacy Pipeline
Drugs Going Generic or Getting a Biosimilar
Novel Breakthrough Therapies
National Trends
Local Initiatives

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- Pharmacy remains one of the largest concerns of most state Medicaid programs.
- Several states (not necessarily Pennsylvania) are taking actions to reduce the cost of providing a prescription drug benefit through Medicaid by:
  – Reducing pharmacy reimbursement
  – Aggressive care management programs
  – Formularies and prior authorization
  – Aggressive use of generic substitution
  – Reducing benefits (prescription drugs are an optional service under Medicaid)
  – Higher rebates from manufacturers
  – Provider profiling
  – Member education
  – Pharmacy 1115 waivers
- The PH-MCOs' reported experience on the management of the pharmacy benefit provides HealthChoices-specific information related to pharmacy trends.
- Mercer's team of dedicated pharmacy specialists review and analyze national information, including drugs in the FDA approval process and drugs coming off patent protection, to provide information on pharmacy trends.
- Although commercial health care programs can leverage copays to influence the cost of drugs to the sponsor (increasing employees' copay reduces cost to sponsor), Medicaid has restrictions on the value of copayments that beneficiaries are subject to and restrictions on denying service in the case of inability to make a copayment.

- Projected medical costs are the result of applying trend and program changes to the adjusted base data.
- The total capitation rate is composed of both the projected medical costs and an administration/underwriting gain factor.
- The administration/underwriting gain factor is developed as a percentage of the capitation rate (i.e., "percent of premium") and varies by rate cell based on consideration of fixed and variable components. Historical HealthChoices administrative/underwriting gain levels are reviewed in the development of an appropriate factor.
- Applicable assessments and taxes are added to the applicable rating periods.
- Mercer certifies to CMS that the final base capitation rates were developed using an actuarially sound process, as described in Section 438.4 of the Medicaid Managed Care Final Rule. Rates developed by Mercer are actuarial projections of future and actual results will differ from these projections.
- It is CMS' opinion that PH-MCOs contracting with states on a risk basis must make their own independent judgments of the states' rates, based on their own costs of doing business and their understanding of the population to be covered.

MATERNITY PRICING

Goal – Identify Maternity Related Expenses	Data Sources
• Appropriately price the maternity care payment	• Plan-reported maternity expenses (Report #26) • Plan-reported maternity counts (Report #27) • PH-MCO submitted encounter data • Supplementary birth certificate data • Historical maternity care payments

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- The maternity care payment is a separate "rate cell" within the HealthChoices rating structure, where risk adjustment is not applied.
- The maternity care payment is applicable to all rate cells and represents a "lump-sum payment" for maternity-related services provided three months prior to delivery and the delivery event. Newborn risk is not included in the maternity care payment.
- DHS makes a maternity care payment to each PH-MCO after receiving documentation of a covered live birth.
- Using information reported by the PH-MCOs and encounters, Mercer develops the separate maternity care payment. As needed, Mercer supplements this information with other data.
- For a pregnant member, the PH-MCO still receives monthly capitation applicable to that person's rate cell. The maternity care payment is a "supplemental" payment.

MATERNITY PRICING

Methodology to Price the Maternity Care Payment:

	Maternity Care Medical Costs
+/-	Program Changes and Trend
+	Administration and Underwriting Gain Factor
=	Maternity Care Payment

- Similar to the construction of the monthly capitation rates, Mercer uses the maternity data as a base for developing the Maternity Care Payment.
- Again, the maternity base data is projected forward to the rating periods, and any program changes applicable to maternity are considered.
- Trends used in developing the Maternity Care Payment are developed in the same manner as those used in monthly capitation payments, with consideration of actual HealthChoices maternity experience.
- Mercer may adjust the C-section/vaginal mix inherent in the base data to reflect the Commonwealth's value-focused purchasing objectives.
- An administration/underwriting gain factor is incorporated and the result is the overall Maternity Care Payment.
- Mercer develops a separate Maternity Care Payment for each rating region, but the same Maternity Care Payment applies to all live deliveries for members in any rate cell.

RATE RANGE

The Medicaid and CHIP Managed Care Final Rules (2016) ended the practice of certifying rate ranges for contracts starting on or after July 1, 2018

Mercer still provides ranges as information to the Commonwealth in determining payment rates for PH-MCOs, which will then be certified

Lower Bound

- Associated with higher levels of efficiencies and effectiveness of managing care, and variations in rate development process

Upper Bound

- Associated with lower levels of efficiencies and effectiveness of managing care, and variations in rate development process

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- The lower-bound and upper-bound of each rate are developed as a function of the overall rate development process. Mercer is cognizant of the assumptions and factors used to develop the rates and considers these issues in developing ranges for use by the Commonwealth.
- In developing the lower-bound and upper-bound, Mercer considers the impact of varying trend factors, the effect of statistical variation present in data sets, the impact of variation in assumptions and other assumptions regarding levels of efficiencies.
- The width of each rate range may vary. In Mercer's actuarial professional opinion, the width of the rate ranges are reasonable.
- The rates that Mercer may recommend to the Commonwealth may not be the mathematical midpoint of any given rate range.
- Use of the rate ranges is at the Commonwealth's discretion.
- For contracts starting on or after July 1, 2018, Mercer now certifies individual rates for each PH-MCO, region, and rate cell.
- Each PH-MCO is responsible for independently reviewing their own data and analyses before making a decision to contract with the Commonwealth.

- HN services have been defined by DHS as a specific set of procedure/revenue codes provided to individuals under age 21. HN services for ages <1 are not considered in the HNRS arrangement but are considered in the Under Age 1 risk-sharing arrangement.
- Mercer used information obtained from the PH-MCOs to develop the premiums.
- On a person-level basis, the projected data is compared against the $5,000 deductible. If an individual has projected HN services expense greater than the deductible, 80% of the amount above the deductible is included in the premium calculation.
- The premium is a PMPM value that is deducted from the capitation rates. The PH-MCOs receive risk-sharing payments based on reporting criteria established by the Commonwealth.
- It is Mercer's recommendation to DHS that the deductibles and coinsurance levels be periodically reviewed for all risk mitigation programs.

HIGH COST RISK POOL

Background
The HCRP is intended to redistribute a fixed amount of money among the participating PH-MCOs to reflect differences in selection related to high-cost recipients, ages 1+

Deductible	Coinsurance
$80,000	80%

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- The HCRP is intended to redistribute a fixed amount of money among the participating PH-MCOs to reflect differences in selection related to high-cost recipients, ages 1+.
- Services that potentially overlap among the risk mitigation programs have been recognized, and efforts made to ensure all programs are mutually exclusive:
  - HN services for individuals less than age 21 are excluded from the HCRP.
  - High-cost drugs eligible for the SDRS are excluded from the HCRP.
- The risk pool premiums are intended to represent 80% of the estimated medical expenses associated with high-cost recipients, beyond the $80,000 attachment point. The remaining 20% of expenses remain in the capitation rates.
- The HCRP amounts will be withheld from the capitation rates and later distributed to the PH-MCOs based on criteria established by the Commonwealth.
  - Premiums are applicable for use in the rating period
  - DHS Distributes the pools on a quarterly basis

- The Under Age 1 risk-sharing program is intended to address the risk of high-cost recipients, ages <1.
- Services that potentially overlap among the risk mitigation programs have been recognized, and efforts made to ensure all programs are mutually exclusive:
  — Individuals Under Age 1 will not be included in the HCRP.
  — Individuals Under Age 1 will not be included in the HNRS program. HN services for individuals less than age 1 are included in the Under Age 1 risk-sharing arrangement.
- The risk sharing premiums are intended to represent 75% of the estimated medical expenses associated with Under Age 1 recipients, beyond the $25,000 attachment point. The remaining 25% of expenses remain in the capitation rates.
- The Under Age 1 risk-sharing premium is a PMPM value that is deducted from the capitation rates. The PH-MCOs receive risk-sharing payments based on reporting criteria established by the Commonwealth.
  — Premiums are applicable for use in the rating period

SPECIALTY DRUG RISK SHARING

Background

This arrangement reimburses PH-MCOs 80% of the repriced drug cost of select high-cost drugs, specifically cystic fibrosis drugs

Deductible	Coinsurance
No deductible	80%

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- Specified cystic fibrosis drugs will be eligible for the risk-sharing arrangement:
  - List of eligible drugs will be maintained on a regular basis
  - Risk-sharing payments to the PH-MCOs will be based on criteria established by the Commonwealth
  - Premiums are applicable to the rating period
- The SDRS arrangement addresses the adverse risk of a small number of high-cost cystic fibrosis drug users:
  - 80% of the estimated high-cost cystic fibrosis expenses will be part of the risk-sharing premium
  - No deductible
- Projected the number of individuals who will be treated with high cost cystic fibrosis drugs
- Projected the prices of these eligible drugs
- Services that potentially overlap among the risk-sharing/risk pool programs have been recognized and efforts made to ensure all programs are mutually exclusive

- Specified medically necessary mobility equipment plus basic installation costs will be eligible for the risk-sharing arrangement:
    — Requirements to request and be approved for these devices
        - Stair lift   - Ceiling lift
        - Vertical lift   - Metal ramps
        - Incline glide
    — Risk-sharing payments to the PH-MCOs will be based on criteria established by the Commonwealth
    — Premiums are applicable to the rating period
- Projected the number of individuals who will request and be approved for home accessibility equipment in the rating period
- The Home Accessibility DME Risk Sharing arrangement mitigates the risk of potentially volatile expenses from users of medically necessary mobility equipment plus basic installation costs:
    — The risk-sharing premium represents 70% of the estimated costs for the rating period for these services
    — No deductible

RISK-ADJUSTED RATES

Capitation Rate ✕ CDPS+Rx Factor = Risk-Adjusted Rate
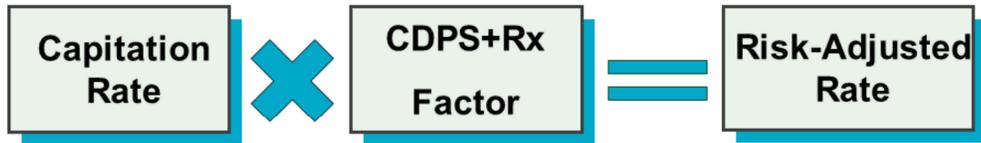
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- This is a basic illustration of the risk-adjusted rate process used in all HealthChoices zones.
- Each PH-MCO will receive a set of risk factors for each rate cell and region combination (e.g., TANF-MAGI Ages 1–20/SW Rate Region 1). The factors will be budget neutral to ensure the risk-adjustment process neither increases nor decreases the total expected capitation applicable to each HealthChoices zone.
- The risk-adjustment factors are updated at regular intervals.
- Risk adjustment will not be applied to the Maternity Care Payment or the Under Age 1 rate cell.

CY 2020 HealthChoices Trend Summaries

CY 2017 to CY 2020 Annual Trend Factors (Unit Cost and Utilization Combined)

Rate Cell	Southeast Hospital Inpatient	Southeast Physician	Southeast Pharmacy	Southeast Other Services	Aggregate Trend
Under Age 1	0.9%	1.6%	3.1%	3.3%	1.4%
TANF-MAGI Ages 1-20	3.5%	4.5%	1.4%	3.9%	3.5%
TANF-MAGI Ages 21+	4.2%	1.9%	5.2%	2.1%	3.4%
Disabled-BCC Ages 1+	3.5%	0.4%	5.3%	4.6%	4.3%
Newly Eligible Ages 19 to 44	5.5%	2.1%	6.6%	1.8%	4.3%
Newly Eligible Ages 45 to 64	5.8%	0.6%	6.6%	0.7%	4.1%
Maternity C-Section	1.7%	3.3%	4.7%	1.9%	2.1%
Maternity Vaginal	1.7%	3.3%	4.8%	1.7%	2.1%
Aggregate	3.5%	2.0%	5.3%	3.3%	3.7%

CY 2017 to CY 2020 Annual Trend Factors (Unit Cost and Utilization Combined)

Rate Cell	Southwest Hospital Inpatient	Southwest Physician	Southwest Pharmacy	Southwest Other Services	Aggregate Trend
Under Age 1	0.5%	2.7%	3.9%	5.3%	1.6%
TANF-MAGI Ages 1-20	5.1%	2.9%	2.3%	3.6%	3.3%
TANF-MAGI Ages 21+	6.7%	3.7%	4.9%	4.3%	4.9%
Disabled-BCC Ages 1+	5.2%	2.4%	4.9%	4.6%	4.7%
Newly Eligible Ages 19 to 44	4.8%	2.3%	6.2%	2.8%	4.4%
Newly Eligible Ages 45 to 64	4.0%	1.7%	6.8%	0.1%	3.7%
Maternity C-Section	2.0%	0.3%	4.7%	5.0%	2.1%
Maternity Vaginal	2.0%	0.3%	4.7%	4.6%	2.1%
Aggregate	4.0%	2.4%	5.1%	3.6%	4.1%

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CY 2017 to CY 2020 Annual Trend Factors (Unit Cost and Utilization Combined)

Rate Cell	Lehigh/Capital Hospital Inpatient	Lehigh/Capital Physician	Lehigh/Capital Pharmacy	Lehigh/Capital Other Services	Aggregate Trend
Under Age 1	0.5%	1.6%	2.5%	3.5%	1.2%
TANF-MAGI Ages 1-20	6.6%	3.1%	2.3%	5.0%	4.3%
TANF-MAGI Ages 21+	6.6%	2.3%	4.6%	3.2%	4.1%
Disabled-BCC Ages 1+	4.5%	2.7%	5.5%	5.0%	4.9%
Newly Eligible Ages 19 to 44	2.6%	3.1%	7.7%	2.5%	4.3%
Newly Eligible Ages 45 to 64	3.2%	1.3%	5.9%	1.0%	3.3%
Maternity C-Section	2.1%	-0.1%	4.3%	2.1%	1.8%
Maternity Vaginal	2.1%	-0.1%	4.4%	2.1%	1.7%
Aggregate	3.3%	2.3%	5.4%	3.9%	4.0%

CY 2017 to CY 2020 Annual Trend Factors (Unit Cost and Utilization Combined)

Rate Cell	Northeast Hospital Inpatient	Northeast Physician	Northeast Pharmacy	Northeast Other Services	Aggregate Trend
Under Age 1	0.2%	0.6%	4.4%	3.9%	1.0%
TANF-MAGI Ages 1-20	7.7%	1.9%	0.0%	6.2%	4.3%
TANF-MAGI Ages 21+	6.7%	4.1%	2.5%	5.6%	4.5%
Disabled-BCC Ages 1+	4.7%	0.6%	4.3%	7.4%	5.4%
Newly Eligible Ages 19 to 44	4.4%	3.6%	4.5%	3.7%	4.1%
Newly Eligible Ages 45 to 64	2.6%	0.2%	6.9%	0.5%	3.4%
Maternity C-Section	3.2%	0.7%	2.4%	3.9%	2.9%
Maternity Vaginal	3.2%	0.7%	2.4%	3.9%	2.8%
Aggregate	3.7%	1.8%	4.2%	5.5%	4.3%

CY 2017 to CY 2020 Annual Trend Factors (Unit Cost and Utilization Combined)					
Rate Cell	**Northwest Hospital Inpatient**	**Northwest Physician**	**Northwest Pharmacy**	**Northwest Other Services**	**Aggregate Trend**
Under Age 1	0.3%	3.4%	4.8%	2.4%	1.3%
TANF-MAGI Ages 1-20	4.9%	3.5%	2.4%	4.3%	3.8%
TANF-MAGI Ages 21+	6.4%	3.0%	4.1%	3.7%	4.2%
Disabled-BCC Ages 1+	6.9%	1.5%	4.6%	5.4%	5.1%
Newly Eligible Ages 19 to 44	3.7%	1.6%	4.4%	2.1%	3.1%
Newly Eligible Ages 45 to 64	3.6%	0.6%	6.4%	0.1%	3.3%
Maternity C-Section	3.2%	1.8%	3.9%	3.0%	2.9%
Maternity Vaginal	3.2%	1.8%	3.9%	2.8%	2.8%
Aggregate	4.3%	2.2%	4.6%	3.8%	4.0%

HEALTHCHOICES

RISK-ADJUSTED RATES MANUAL – 2019 VERSION

OCTOBER 25, 2019

Commonwealth of Pennsylvania

NOTE TO THE READER

This manual provides background information regarding the HealthChoices risk-adjustment policies and procedures. Updates to the manual are made annually to account for any changes to these policies and procedures.

CHANGES FROM THE 2018 VERSION

Multiple changes to the HealthChoices risk-adjustment methodology have occurred since the release of the Risk-Adjusted Rates (RAR) Manual 2018 Version in October 2018. This updated manual accounts for these changes. The main updates to the manual are listed below:

- Updated Pennsylvania (PA)-Specific Cost Weights – Effective January 1, 2019, the PA-Specific cost weights were updated to use encounter and fee-for-service (FFS) data with more recent dates of service (CY 2016 and CY 2017). The process utilized to develop the updated cost weights is described in detail within Section 3 of the manual and is consistent with prior cost weight development approaches.

- Newly Eligible Population Rate Cell Structure – Effective January 1, 2019, the four rate cells applicable for the Newly Eligible population were consolidated to two rate cells: Newly Eligible Ages 19 to 44 and Newly Eligible Ages 45 to 64. This change is reflected throughout the manual.

- Removal of Inherent Rate Risk-Adjustment Process – Effective January 1, 2019, the inherent rate risk-adjustment process applicable to the Newly Eligible rate cells was removed. Prior to this, risk-adjustment plan factors were developed for the entire Newly Eligible population in total, but applied uniformly to rate cells that varied by age and gender groups. As a result, an adjustment to the budget neutral plan factors was necessary to avoid double counting the risk already explained through rate cells that varied by age and gender with the risk explained through the risk-adjustment model (which contains age and gender demographic components). With the updated rate cell structure for the Newly Eligible population in effect as of January 1, 2019, the risk-adjustment plan factors are now developed separately for the two Newly Eligible rate cells. As a result, the inherent rate risk adjustment is no longer necessary. This change is now reflected throughout the manual, most notably within Section 7.

- Anticipated Refinements – This manual details risk-adjustment policies and procedures in effect as of July 2019. This section has been updated to reflect anticipated refinements that have a high likelihood of occurring in the future. Each anticipated refinement to the risk-adjustment process is described in this section.

Various other minor changes have also been made to this manual. Although this manual attempts to define and describe the overall development of the risk-adjustment process, specific application may vary depending on the available data, changes to the covered population and benefits, physical

health managed care organization (PH-MCO) participation in HealthChoices and any other process refinements. Additional details regarding the specific data and technical processes used to develop the individual risk scores are shared with the PH-MCOs in a methodology letter.

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1
INTRODUCTION

In 1997, the Commonwealth of Pennsylvania (Commonwealth) implemented the HealthChoices program, a managed care program for Medical Assistance recipients. The goals of the HealthChoices program are to improve access to care and the quality of care provided to the Commonwealth's vulnerable, low-income population, while stabilizing public health care spending. The Commonwealth's Department of Human Services (DHS) oversees the physical health component of the HealthChoices program and is responsible for the continued pursuit of these goals in the ever-changing environment of health care.

The physical health component of HealthChoices is administered through contracts between the Commonwealth and several different physical health managed care organizations (PH-MCOs). In return for a predefined payment amount (i.e., capitation rate), these PH-MCOs enter into agreements that cover the terms for delivery of services, recipient rights, reporting requirements and the overall operation of the physical health component of the HealthChoices program. The PH-MCOs choose to take on the financial risk of delivering health care services to their HealthChoices members and manage their members' care using tools and approaches they deem effective. Medical Assistance recipients who are eligible for the HealthChoices program either voluntarily select or are assigned to one of these different PH-MCOs serving the particular geographic area in which the recipient lives. With multiple PH-MCO choices available to HealthChoices members, variations in health risk among the participating PH-MCOs are unavoidable.

As a prudent health care purchaser, DHS continues to look for innovative ways to effectively use the Commonwealth's public resources to pay for the HealthChoices program. In 2003, with input from the PH-MCOs and other stakeholders, DHS introduced a Medicaid-based risk-assessment tool to further achieve the goal of matching payment to risk. This is accomplished by using the health risk for each member, as measured by the risk-assessment tool, to determine the health risk of the population enrolled in each PH-MCO and then adjusting the capitation rates based on the PH-MCO's measured health risk. This process results in capitation rates that vary for each PH-MCO to account for the underlying health risk of the enrolled population. This process results in PH-MCOs receiving higher payments when the enrolled population is expected to be higher risk than the average population. Similarly, PH-MCOs will receive lower payments when the enrolled population is expected to be lower risk than average. Recognizing that member risk attraction patterns can

change over time, PH-MCO health risk is updated frequently. Currently, this is done on a quarterly basis for the HealthChoices program.

This manual provides background information regarding risk-adjustment policies and procedures that were the most up-to-date in effect at the time the manual was released. Any anticipated changes are referenced within the manual in Section 8. Although this manual attempts to define and describe the overall development of the risk-adjustment process, specific application may vary depending on the available data, changes to the covered population and benefits, PH-MCO participation in HealthChoices and any other process refinements. Additional details regarding the specific data and technical processes used to develop the individual risk scores are shared with the PH-MCOs in a methodology letter. This letter also describes the intended process that will be used to calculate the PH-MCO risk scores for the corresponding period. For significant changes, and where practical, the PH-MCOs will be notified in advance and their feedback will be considered prior to application.

The risk-adjustment approach used to adjust the capitation payments has been refined over time to incorporate changes in risk-adjustment practices and to address feedback collected on the process. Appendix A provides a historical perspective on the HealthChoices risk-adjustment process, which includes a summary of the implementation process and the major changes that have been made since 2003.

To help readers less familiar with risk adjustment, a glossary of terms has been provided in Appendix B.

2

CHRONIC ILLNESS & DISABILITY PAYMENT SYSTEM + RX MODEL BACKGROUND

To measure the risk associated with each PH-MCO, DHS evaluated possible risk-assessment models that measure health risk using demographic indicators in addition to disease history. While many risk-assessment models exist, DHS elected to implement the only model that was specifically designed for Medical Assistance populations. The Chronic Illness & Disability Payment System (CDPS) is a diagnostic classification system that Medicaid programs can use to make health-based capitated payments for Temporary Assistance to Needy Families (TANF) and Disabled Medicaid individuals. The CDPS model was designed by the University of California, San Diego (UCSD) in conjunction with clinical consultants and was used to risk adjust HealthChoices capitation payments from 2003 through 2008.

In 2008, UCSD performed a comprehensive review of the existing CDPS model using updated data. While most of the framework remains the same, the model update released in November 2008 includes a reevaluation of model components and updates to several disease classifications. As part of this update, UCSD also created a combined diagnostic and pharmacy model that uses CDPS in conjunction with UCSD's pharmacy-based risk-assessment model, which is referred to as Medicaid Rx. Since 2009, the combined CDPS and Medicaid Rx (CDPS+Rx) risk-assessment model has been used to adjust capitation payments for HealthChoices. This section outlines the major components of the CDPS+Rx model. More information regarding any of the UCSD models can be found on the UCSD website (http://cdps.ucsd.edu/).

MODEL COMPONENTS

The CDPS+Rx model was designed using data from 30+ Medicaid programs. The intent of the model was to include readily available demographic and disease characteristics that were valid and accurate estimators of current and future health care expenditures. As many services require the provision of diagnoses or a valid National Drug Code (NDC) in order to receive payment for services rendered, electronic claims information is a viable method of collecting diagnostic and drug data for risk-assessment purposes.

For diagnoses reporting, UCSD staff, along with their clinical consultants, reviewed the ICD-9[1] diagnoses manual to determine which diagnoses were ill-defined and inappropriate for risk assessment. Many diagnoses are indicative of symptoms rather than a specific disease condition that is likely to persist. For example, a diagnosis of chest pain can be indicative of many conditions and is most likely not a good estimator or predictor of health care expense. Once the ill-defined conditions were isolated, the remaining diagnoses were placed into 19 major categories. Some are representative of specific body systems (e.g., cardiovascular or pulmonary) and others fall into a group of illnesses that affect multiple systems (e.g., infectious disease or diabetes). For diagnosis-based conditions, these major categories are further delineated into subcategories, based on their perceived medical intensity.

To determine which NDCs were appropriate to supplement the CDPS risk-assessment model for the identification of chronic conditions, UCSD staff and clinical consultants reviewed both the current listing of NDCs and the current 45 disease condition groupings within the Medicaid Rx model. The result of this review is the restricted version of the Medicaid Rx model, which includes 15 disease conditions. These Medicaid Rx conditions are linked to a specific subcategory within the CDPS model, corresponding to the appropriate chronic disease condition and perceived medical intensity.

Table 2.1 provides a listing of the major categories, medical intensity subcategories/pharmacy categories and sample conditions within each classification. The 15 categories within the restricted version of the Medicaid Rx model are identified by MRX and appear with the CDPS-linked subcategory:

TABLE 2.1 – THE CDPS+RX CATEGORIES WITH SAMPLE CONDITIONS

DISEASE CATEGORY	SAMPLE CONDITIONS
Cardiovascular	
Very High	Heart transplant status or artificial heart replacement
Medium and MRX Anti-Coagulants	Congestive heart failure, primary pulmonary hypertension or cardiomyopathy
Low	Heart valve transplant, atrial fibrillation or angina
Extra Low and MRX Cardiac	Hypertension
Psychiatric	
High	Schizophrenia
Medium	Bipolar affective disorder or hallucinations
Medium Low	Major depression or impulse control disorder

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[1] International Classification of Diseases, 9th Revision

DISEASE CATEGORY	SAMPLE CONDITIONS
Low and MRX Depression/Psychosis/ Bipolar	Other depression, obsessive-compulsive disorder or antisocial disorder
Skeletal and Connective	
Medium	Aseptic necrosis of bone, anomalies of spine or kyphosis
Low	Ankylosis of joint, cyst of bone or traumatic amputation of arm/hand
Very Low and MRX Inflammatory/Autoimmune	Kissing spine, claw toe, anomaly of the spleen or conjoined twins
Central Nervous System	
High	Quadriplegia, Werdnig-Hoffmann disease or other motor neuron disease
Medium and MRX Multiple Sclerosis/Paralysis	Primary cerebellar degeneration, multiple sclerosis or Schilder's disease
Low; MRX Parkinson's/Tremor and MRX Seizure Disorders	Coma, Pick's disease or Parkinson's disease
Pulmonary	
Very High	Cystic fibrosis, lung transplant or tracheostomy complications
High	Respiratory arrest or selected pneumonias
Medium	Pulmonary collapse, acute respiratory failure or congenital cystic lung
Low and MRX Tuberculosis	Chronic bronchitis, asthma or mass in chest
Gastrointestinal	
High	Celiac disease or liver transplant status
Medium	Alcoholic fatty liver, chronic hepatitis or regional enteritis
Low	Ulcer of the esophagus, umbilical hernia or chronic pancreatitis
Diabetes	
Type 1	Type 1 diabetes
Type 2 and MRX Diabetes	Type 2 or unspecified diabetes
Skin	
High	Skin transplant status or chronic ulcer of skin
Low	Ulcer of lower limbs, except pressure ulcer
Very Low	Cellulitis or burn
Renal	

DISEASE CATEGORY	SAMPLE CONDITIONS
Extra High	Renal dialysis status
Very High and MRX ESRD/Renal	Chronic kidney disease
Medium	Nephrotic syndrome or kidney transplant status
Low	Kidney infection, kidney stones or urinary incontinence
Substance Abuse	
Low	Drug withdrawal, drug psychoses or cocaine dependence
Very Low	Alcohol abuse, dependence or psychosis
Cancer	
Very High	Malignant neoplasm of pancreas or secondary malignant neoplasm of respiratory and digestive systems
High	Malignant neoplasm of stomach, trachea, bronchus, lung or brain
Medium and MRX Malignancies	Malignant neoplasm of colon, thymus, heart or Hodgkin's disease
Low	Malignant neoplasm of lip, tongue, breast or malignant melanoma of skin
Developmental Disabilities	
Medium	Severe or profound mental retardation
Low	Mild/moderate mental retardation or Down syndrome
Genital	
Extra Low	Uterine and pelvic inflammatory disease
Metabolic	
High	Lipidoses or non-HIV immunity deficiencies
Medium	Cushing's syndrome, Kwashiorkor or other autoimmune disease
Very Low	Other pituitary disorders or gout
Eye	
Low	Retinal detachment or cornea transplant status
Very Low	Cataract, glaucoma or congenital eye anomaly
Cerebrovascular	
Low	Hemiplegia, hemiparesis or speech and language deficits
Infectious Disease	

DISEASE CATEGORY	SAMPLE CONDITIONS
AIDS, High	AIDS,[2] cryptococcosis or Kaposi's sarcoma
Infectious, High and MRX Infections, High	Pseudomonas, Whipple's disease or cytomegaloviral disease
HIV, Medium; MRX Hepatitis and MRX HIV	Asymptomatic HIV[3] infection
Infectious, Medium	Other septicemia, tularemia, brucellosis or rat-bite fever
Infectious, Low	Toxic shock syndrome, acute poliomyelitis, herpes zoster or viral hepatitis
Hematological	
Extra High and MRX Hemophilia/von Willebrands	Congenital factor VIII and factor IX coagulation defects (hemophilia)
Very High	Hemoglobin-S sickle-cell disease
Medium	Aplastic anemia or splenomegaly
Low	Congenital factor XI deficiency, other hemorrhagic conditions or genetic anomalies of leukocytes

Prior to assessing the value associated with each of the above categories, a protocol was established as to how individuals could be classified into one of the above CDPS+Rx categories. The CDPS+Rx model was developed using 12 months of incurred diagnostic and pharmacy data to classify individuals into disease categories. This 12-month period is referred to as the study period. To reduce the effects of variations in data reporting, only a single diagnosis, regardless of position (i.e., primary, secondary, tertiary, etc.) or a single incidence of a drug, is necessary to establish a CDPS+Rx category. In the event that multiple conditions are identified within a major category, the individual is assigned to the subcategory with the highest intensity level. This protocol recognizes that individuals with multiple conditions in the same major category will most likely be treated simultaneously and not incur substantial additional cost. Although the CDPS+Rx model only incorporates the most serious disease intensity within each major category, it recognizes the increased medical cost when multiple systems are affected with chronic conditions. For example, an individual diagnosed with Antisocial Disorder (Psychiatric, low), Schizophrenia (Psychiatric, high) and Hypertension (Cardiovascular, extra low), would only be classified into the Psychiatric, high and the Cardiovascular, extra low categories.

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[2] Acquired Immune Deficiency Syndrome

[3] Human Immunodeficiency Virus

The disease categories primarily represent chronic conditions that are likely to persist and correlate to additional medical expense. However, many acute conditions related to low-income populations are not included within the list above, such as ear infections. Recognizing that not all risk is explained through the chronic disease categories, the CDPS+Rx model incorporates additional demographic factors to estimate the medical resources not contained in one of the conditions listed in Table 2.1. There are 11 demographic classifications within this component of the CDPS+Rx model, which are listed below. For the demographic category determination, the exact age (not rounded) of each individual at the end of the study period is used:

- Under age 1

- Ages 1 to 4

- Male ages 5 to 14

- Female ages 5 to 14

- Male ages 15 to 24

- Female ages 15 to 24

- Male ages 25 to 44

- Female ages 25 to 44

- Male ages 45 to 64

- Female ages 45 to 64

- Age 65 and over

POPULATIONS EVALUATED

During the CDPS and CDPS+Rx model development, significant cost variation was measured among the TANF and Disabled populations. In order to maintain the cost variation and reflect that Medicaid programs typically have separate capitation rates for these two populations, separate models were developed for the TANF and Disabled populations.

In addition to recognizing the cost differences associated with the TANF and Disabled populations, UCSD explored the possibility of separate models for adults and children. For the TANF population, significant amounts of data were available to develop a TANF adult model and a TANF child model. Despite the variance in disease prevalence among adults and children, the Disabled population did not have sufficient membership to provide separate models for the adult and children populations. To reflect that certain conditions have significantly different costs when they are attributable to

children, the CDPS+Rx Disabled model contains add-on values for children with certain disease conditions. These factors, referred to as child interaction factors, are incorporated in the risk assessment for any Disabled child. There are 10 classifications within this component of the Disabled CDPS+Rx model, which are listed below:

- Cardiovascular, very high

- Cardiovascular, medium

- Central nervous system, medium

- Pulmonary, very high

- Pulmonary, high

- Gastrointestinal, high

- Metabolic, high

- HIV, medium

- Infectious, medium

- Hematological, extra high

RELATIVE COST WEIGHTS

The CDPS+Rx categories provide a demographic and disease description of the Medicaid population studied. However, to best utilize the CDPS+Rx model to predict future expenditures, the relative cost associated with each CDPS+Rx model component needs to be known. Medical cost information is collected by individual and compared to their CDPS+Rx categories (disease, including any child interaction factors, and demographic). Medical costs are then assigned to each CDPS+Rx category using a statistical analysis.[4] The estimated medical costs from the analysis are translated into a relative cost weight by comparing the costs attributable to each category to the average cost of the total population. For example, if the average expenditures for a TANF Child are $1,800 per year and the costs attributable to the CDPS+Rx category Gastrointestinal, low are $3,600 for the same year, the resulting TANF Child model relative cost weight for Gastrointestinal, low is 2.0 ($3,600/$1,800). Therefore, a TANF Child classified into the Gastrointestinal, low category would be

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[4] A standardized, statistical multiple regression analysis was used.

approximately two times more expensive than the average TANF Child (without taking into account the member's demographic and additional disease conditions, if any).

An additional consideration when developing relative cost weights is the relationship between incurred medical costs and the classified CDPS+Rx categories. There are two primary methods of correlating disease and cost data: the prospective method and the concurrent method. Under the prospective approach, disease conditions collected in one year are compared to the incurred medical costs in the subsequent year. Since this method utilizes first year diagnoses to "predict" the second year's health costs, there is a lesser reliance on disease conditions and a greater reliance on demographic categories. Under the concurrent approach, disease conditions collected in one year are compared to the medical costs within the same year. Since the disease and cost information for the same time period are used in this method, there is a greater reliance on disease conditions and a lesser reliance on demographic categories.

The CDPS+Rx logic available through the UCSD website contains the relative cost weights associated with each category from the national data set used to develop the CDPS+Rx model. Since cost weights are used to estimate relative expenditures within a specific Medicaid program, the cost weights should reflect the expenditures associated with the program's benefit package. As such, several versions of published cost weights are available, based on different benefit packages, and are provided separately for prospective and concurrent approaches.

Cost weights for the HealthChoices program were developed by Mercer using PA-specific data and are discussed in the next section.

The design of the CDPS+Rx model and the resulting relative cost weights assumes that the effects of diseases in different major categories are additive. To arrive at the estimated relative expenditure for an individual, the sum of the relative cost weights for each individual's CDPS+Rx categories (disease, including any child interaction factors and demographic) is calculated. This relative expenditure value is known as a CDPS+Rx risk score, or an acuity factor.

Periodically, UCSD releases updated versions of the CDPS+Rx model. The most recent CDPS+Rx version, Version 6.3, uses both ICD-9 and ICD-10[5] for the classification of CDPS+Rx disease conditions. With these updates, UCSD sometimes releases updated cost weights. Currently, the national cost weights available through UCSD's website were developed using 2003 through 2007 data from 30+ Medicaid programs.

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[5] International Classification of Diseases, 10th Revision

3
PENNSYLVANIA-SPECIFIC CDPS+RX COST WEIGHTS

As discussed in the prior section, the relative costs, referred to as cost weights, available through the UCSD website, were based on national experience from over 30 Medicaid programs. Since more recent and complete data was available through the HealthChoices encounter submissions, a decision was made to develop cost weights directly from this PA data. As a result of this decision, which was originally made in 2007, HealthChoices data from calendar year (CY) 2005 and CY 2006 were used to develop the initial PA-specific cost weights. Later, in 2014, these cost weights were updated to utilize data from all PA counties since the HealthChoices program had expanded to the entire Commonwealth, and to reflect more recent experience at the time. Additionally, the cost weights were updated a second time later in 2014, to reflect a small change in the ages that defined a child versus an adult within the HealthChoices TANF rate cell structure, for rates and risk-adjustment application periods effective January 1, 2015. The PA-specific cost weights have been updated again using more recent statewide data from CY 2016 and CY 2017 for rates and risk-adjustment application periods effective January 1, 2019. This section describes the various steps used to develop the updated PA-specific CDPS+Rx cost weights, which are referred to as Version 3.0 cost weights.

The cost weight development process includes three main steps: determine relative individual managed care per member per month (PMPM) costs, classify individuals into CDPS+Rx categories and determine how each CDPS+Rx category influences costs. This process produces additive relative cost weight factors for each CDPS+Rx category.

For the development of the PA-specific Version 3.0 weights, four distinct sets of cost weights using the three models were developed specific to the four rate cells/populations subject to risk adjustment: TANF-Modified Adjusted Gross Income (MAGI) Ages 1–20, TANF-MAGI Ages 21+, Disabled-Breast and Cervical Cancer (BCC) Ages 1+ and Newly Eligible. It should be noted that the child interaction factors were developed using individuals ages 18 and under, which aligns with the national cost weight development. For consistency with the HealthChoices risk-assessment process, individuals with both Medicare and Medicaid coverage (dual eligibles) were excluded from the cost weight development.

DETERMINE RELATIVE INDIVIDUAL MANAGED CARE COSTS

To perform this step, CY 2016 and CY 2017 PH managed care encounter data were prepared for the cost analysis. Statewide data were used since HealthChoices functions in all PA counties. The following exclusions to the data were performed to be consistent with the managed care program:

- The application of the high-cost risk pool (where 80% of the costs above the $80,000 equivalent threshold were removed).

- The application of the home nursing risk sharing (where 80% of the home nursing costs above the $5,000 equivalent threshold were removed).

- The application of the specialty drug risk sharing (where costs for eligible Hepatitis C and cystic fibrosis drugs were repriced and then 80% of those repriced drug costs were removed).

- The application of the specialty drug risk pool (where costs for eligible Hepatitis C drugs were repriced and then 10% of those repriced drug costs were removed).

- The application of pharmacy rebates by therapeutic class (where an assumed rebate amount was removed from each drug based on the drug's therapeutic class).

- Maternity services that are reimbursed separately through the maternity care payment that is not subject to risk adjustment (three months of prenatal care and delivery costs).

It is noted above that eligible Hepatitis C and cystic fibrosis drugs were repriced and then a percentage of those drugs were removed in the cost analysis. The costs for the Hepatitis C drugs were repriced based on an average expected cost level for Hepatitis C drugs in the application period, since the costs for these drugs in the time period in which the weights will be applicable are expected to be significantly lower than the costs for these drugs in the CY 2016 and CY 2017 data time periods used for the weight development. In this process, all Hepatitis C drug costs in the CY 2016 and CY 2017-time period were repriced using the same average price, regardless of the drug that was used during this time period. Similarly, for the cystic fibrosis drugs, these costs were repriced to levels expected in the time period for which the weights will be applied, which is different than the amounts seen in the CY 2016 and CY 2017-time periods. However, the repricing for cystic fibrosis drugs costs was done separately for each specific cystic fibrosis drug.

Prior to finalizing the individual costs, select services were shadow priced. Records submitted by the PH-MCOs as subcapitated services were valid services that should contribute to a recipient's total health care cost. Therefore, to ensure that a reasonable payment was attributed to these subcapitated services, shadow pricing was applied to these records. To price subcapitated services, a fee schedule was developed using the average PH-MCO-paid amount once outliers had been removed. This fee schedule was developed at the procedure code level for professional services

and at the revenue code level for outpatient services. When developing the shadow pricing fee schedule, claims associated with the following types of services were excluded:

- Bundled services.

- Subcapitated and zero pay claim lines.

Additionally, in the development of the shadow pricing fee schedule, outlier payment amounts by procedure and revenue codes were adjusted up or down to certain values using the following criteria:

- Payment amounts by procedure and revenue codes less than the twenty-fifth percentile were raised to the twenty-fifth percentile payment amount for the specific procedure/revenue codes.

- Payment amounts by procedure and revenue codes greater than the seventy-fifth percentile, plus two times the interquartile range (twenty-fifth and seventy-fifth percentile), were lowered to that amount for the specific procedure/revenue codes.

Using these data, a PMPM cost was determined for each member for CY 2016 and CY 2017, respectively. Finally, individual relative costs to be used in the regression analysis for each member were determined as the ratio of that member's PMPM to the rate cell/population-specific (TANF-MAGI Ages 1–20, TANF-MAGI Ages 21+, Disabled-BCC Ages 1+ and Newly Eligible) average PMPM for each calendar year.

CLASSIFY INDIVIDUALS INTO CDPS+RX CATEGORIES

Diagnostic data and pharmacy data were collected from CY 2016 and CY 2017 claims and encounter data, including all appropriate managed care carve-out services. Since the goal of this step was to determine CDPS+Rx disease classifications only (not health care costs), Mercer used FFS claims and encounter data from both the PH-MCOs, as well as the behavioral health (BH) MCOs, for disease flagging. To be consistent with the risk score application, the following data exclusions were made from the CDPS+Rx classification process (this is discussed further in Section 5):

- Laboratory and radiology services were excluded to avoid false positive disease identification that is typically associated with these records.

- Newborn services that appear to be reported under the mother's Medicaid ID.

- Records that did not pass the required PROMISe™ (the Commonwealth's Medicaid management information system [MMIS]) edits.

To determine disease flagging, individuals are first assigned an appropriate rate cell/population based on their age and eligibility at the end of each year. Only those individuals with at least six

months of Medicaid eligibility (not necessarily continuous) during the base year were classified into CDPS+Rx categories. Individuals with Medicare coverage (dual eligibles) were excluded from CDPS+Rx classification because the data necessary to appropriately identify disease conditions is often not present for dual eligibles, since Medicare is the primary payer for these individuals.

DETERMINE HOW EACH CATEGORY INFLUENCES COSTS

With a concurrent model, disease conditions flagged in one year are aligned with the same year's managed care health costs. In order to have ample observations, a two-year approach was used. CY 2016 CDPS+Rx disease conditions (developed in step two) were paired with CY 2016 managed care relative PMPM costs (developed in step one) for each scored individual. Likewise, CY 2017 CDPS+Rx disease conditions were paired with CY 2017 managed care relative PMPM costs for each scored individual. This process could result in an individual contributing two observations for the cost weight development, if they met the six-month scoring criteria for each calendar year. Using both years of data, a regression analysis was performed on each of the four rate cell/population groups (TANF-MAGI Ages 1–20, TANF-MAGI Ages 21+, Disabled-BCC Ages 1+ and Newly Eligible).

As part of the regression analysis, a large, stable demographic group was chosen as the baseline (i.e., intercept) for each population group. For TANF-MAGI Ages 21+, Disabled-BCC Ages 1+ and Newly Eligible, males ages 25–44 were chosen; males ages 15–24 (only includes children ages 20 and under) were used as the baseline for TANF-MAGI Ages 1–20. These baseline selections are consistent with those used by UCSD within the CDPS+Rx model development.

Some conditions were combined when the cost weights did not fit the expected hierarchy disease progression. In some cases, the same categories were consolidated within the national cost weights developed by UCSD. Additionally, some categories were removed from the model if the resulting cost weight was negative. The table below depicts the major categories wherein some detailed disease categories were combined or removed, separate for each rate cell/population for which the weights were developed:

TABLE 3.1 – MAJOR DISEASE CATEGORIES THAT REQUIRED CATEGORY CONSOLIDATION

TANF-MAGI AGES 1–20	TANF-MAGI AGES 21+	DISABLED-BCC AGES 1+	NEWLY ELIGIBLE
Skeletal	Skeletal	Skeletal	Skeletal
Renal	Renal	Pulmonary	Renal
Metabolic	Developmental Disability	Renal	Developmental Disability
Infectious Disease	Metabolic	Developmental Disability	Metabolic
Hematological	Infectious Disease	Metabolic	Infectious Disease
	Hematological	Infectious Disease	Hematological

The Disabled-BCC Ages 1+ weights created some unique challenges. The PA-specific regressions resulted in some negative demographic coefficients that could produce a negative risk score for individuals who are not flagged with any CDPS+Rx categories. Due to this issue, the PA demographic factors from the regression analysis were altered by using demographic factors that were developed using PA-specific data from individuals who either had no disease conditions or no claims in CY 2016 and/or CY 2017. In particular, the costs for these members by age/gender demographic group were compared to the average cost across all members in this population to derive the demographic factors utilized for the Disabled-BCC Ages 1+ population.

Appendix C contains the Version 3.0 PA-specific cost weights that were developed using the process described in this section. These cost weights became effective starting with the 2019a risk assessment and have been used to adjust capitation

4

CAPITATION RATES AND OTHER REIMBURSEMENT ARRANGEMENTS

With each contract, a schedule of capitation rates that meets the requirements established by Centers for Medicare & Medicaid Services (CMS) is agreed upon between the Commonwealth and each PH-MCO. These rates vary by geographic region and rate cell, and include a supplemental maternity payment that is paid for each delivery incurred by the PH-MCO. This section describes each of these components and how the risk-adjustment process is applied to the rates.

Capitation rates are not the only form of reimbursement for the HealthChoices program. This section also describes additional funding streams, which include risk-sharing, risk-pool and pay-for-performance (P4P) arrangements.

GEOGRAPHIC REGIONS

Separate contracts are established for a geographic area that is referred to as a zone. As a result, a separate schedule of rates is developed for each zone. In all situations, the rates are further geographically divided into regions to recognize the variation in medical expenses associated with recipients living in different areas within a zone.

There are currently five zones in the HealthChoices program: Southeast (SE), Southwest (SW), Lehigh/Capital (L/C), Northeast (NE) and Northwest (NW). Each of the five zones is composed of two regions. Table 4.1 below illustrates the composition of each zone and region. This composition is subject to change, and stakeholders will be notified of any changes prior to implementation:

TABLE 4.1 – HEALTHCHOICES ZONES, REGIONS AND COUNTIES

ZONE	REGION	COUNTIES
Southeast	Rate Region 1	Delaware, Philadelphia
Southeast	Rate Region 2	Bucks, Chester, Montgomery
Southwest	Rate Region 1	Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Lawrence, Washington, Westmoreland
Southwest	Rate Region 2	Bedford, Blair, Cambria, Indiana, Somerset
Lehigh/Capital	Rate Region 1	Adams, Berks, Cumberland, Lancaster, Lehigh, Northampton, York
Lehigh/Capital	Rate Region 2	Dauphin, Franklin, Fulton, Huntingdon, Lebanon, Perry

ZONE	REGION	COUNTIES
Northeast	Rate Region 1	Bradford, Centre, Clinton, Lackawanna, Luzerne, Lycoming, Monroe, Pike, Sullivan, Susquehanna, Tioga, Wayne, Wyoming
Northeast	Rate Region 2	Carbon, Columbia, Juniata, Mifflin, Montour, Northumberland, Schuylkill, Snyder, Union
Northwest	Rate Region 1	Crawford, Erie, Forest, Mercer, Venango, Warren
Northwest	Rate Region 2	Cameron, Clarion, Clearfield, Elk, Jefferson, McKean, Potter

RATE CELLS

In addition to separate regions, the HealthChoices program considers the different risk characteristics of the enrolled population by establishing rate cells, which are a combination of Medicaid eligibility categories and age. The following are the rate cells for which separate capitation rates are developed and subsequently risk-adjusted (note that rate cells not subject to risk adjustment are indicated in parentheses):

- Under Age 1 (not subject to risk adjustment)

- TANF-MAGI Ages 1–20

- TANF-MAGI Ages 21+

- Disabled-BCC Ages 1+

- Newly Eligible Ages 19 to 44

- Newly Eligible Ages 45 to 64

Risk adjustment further analyzes the risk of each PH-MCO beyond what is explained by establishing rate cells alone. Separate risk scores are developed for each region and rate cell combination. The resulting risk scores are then applied to the capitation rate subject to risk adjustment. The capitation rate subject to risk adjustment is the lowest contracted capitation rate in a given region and rate cell, less an amount removed from certain PH-MCO's capitation rates based on their reported medical loss ratio (MLR), less any applicable exclusion amounts and less the MCO assessment. The additional amounts not subject to risk adjustment, including applicable exclusion amounts, the MCO assessment and amounts contracted above the lowest contracted rate in a region, are then added to this amount to arrive at the final capitation rates paid to the PH-MCOs. Any amounts removed from a PH-MCO's capitation rate as a result of their MLR reporting are not added back into the capitation rates.

SUPPLEMENTAL MATERNITY CARE PAYMENT

One issue that could result in a great deal of variance among the PH-MCOs' enrolled populations and hence their risk, is maternity events and their related costs. Costs for pregnant women are substantially higher than the average medical cost of care for men and non-pregnant women with similar demographic characteristics. To mitigate the potential maternity issue within the rate-setting process, the HealthChoices program includes a supplemental maternity care payment that covers some of the prenatal costs, along with all of the delivery costs for live births. Each PH-MCO receives a lump sum maternity care payment when one of its members gives birth and the Commonwealth is notified that a birth has occurred. To the extent that PH-MCOs have a different incidence rate of maternity events, the supplemental maternity payment better matches payment to risk by providing greater aggregate payments to PH-MCOs experiencing more deliveries. However, risk-assessment models, including CDPS+Rx, have not proven to be an effective tool in measuring risk differential related to maternity expenses. Therefore, the supplemental maternity payments are not risk-adjusted.

RISK-SHARING AND RISK-POOL ARRANGEMENTS

Although risk adjusting based on the distribution of member demographics and classified disease conditions does improve the match between payment and risk, the CDPS+Rx model is not a perfect indicator of health risk. To address specific situations that have been identified as costly and not effectively accounted for through the CDPS+Rx model, the Commonwealth utilizes risk-sharing and risk-pool arrangements.

Under a risk-sharing arrangement, the Commonwealth shares a portion of the PH-MCOs' expenses that are beyond a certain level (i.e., deductible). To fund this risk-sharing program, a premium amount is calculated based on historical experience for those populations and corresponding expenses that would be the Commonwealth's responsibility. Currently, the HealthChoices program has a risk-sharing program to mitigate large swings in annual home nursing expenses and to direct home nursing-related funding more equitably based on the enrolled home nursing risk. In addition to the home nursing risk-sharing program, the Commonwealth currently has a Hepatitis C and cystic fibrosis specialty drug risk-sharing (SDRS) arrangement to mitigate the large costs and uncertainty surrounding these drugs. There is no deductible for this program. The Commonwealth also has a risk-sharing program for the Under Age 1 rate cell, though this population is not subject to risk adjustment.

Risk-sharing programs and their underlying components (deductibles and the amount above the threshold that is the Commonwealth's responsibility) are evaluated and possibly revised each contract year.

Under a risk-pool arrangement, the Commonwealth sets aside, from the capitation rates, a percentage of the expenses that exceed a certain threshold for a specific targeted population or service. The pool of funds generated from the capitation withhold is then redistributed among the

participating PH-MCOs, based on each PH-MCO's portion of the reported medical expenses associated with the targeted population or services. Since the risk-pool arrangement redistributes capitation revenue across the PH-MCOs, it does not increase or decrease the overall payments to the HealthChoices program.

Currently, the HealthChoices program has a risk-pool program to improve the distribution of available funds among the participating PH-MCOs for high-cost recipients. Also, the Commonwealth has a Hepatitis C specialty drug risk pool (SDRP). The SDRP is funded by 10% of the projected Hepatitis C drug cost included in the capitation rate ranges. There is no deductible for this program.

Risk-pool programs and their underlying components (threshold and the portion above the threshold that is used to calculate the withhold amount) are evaluated and possibly revised each contract year.

PAY-FOR-PERFORMANCE (P4P)

The Commonwealth operates a P4P program in which each PH-MCO is eligible to earn additional revenue based on improved and continued high performance in targeted areas identified by the Commonwealth. If the P4P program is fully funded, PH-MCOs can earn up to 5% of approved capitation payments. The design elements associated with the P4P are subject to change with each contract year.

The above rate cell structure and other reimbursement arrangements were carefully considered in the design and application of the HealthChoices risk-adjustment process.

5

DATA COLLECTION, VALIDATION AND PROCESSING

The cornerstone of the risk-adjustment process is the assessment of member demographics, along with their diagnostic and pharmacy history through collected data. After the data are collected, they must be validated for completeness and accuracy before they can be analyzed for risk adjustment. In addition, the data must meet certain criteria, which determine whether they are included or excluded from the risk-adjustment process. This section describes the methodology behind the collection and validation of the data used specifically to support the risk-adjustment process.

DATA ELEMENTS

The HealthChoices risk-adjustment process requires numerous files that are used to classify members into disease categories, determine each recipient's demographic category, assess whether sufficient experience exists to measure an individual's health risk and assign each recipient to a PH-MCO, region, rate cell, age and gender group. The details of each collected file, the required elements and the manipulation of the data required for the risk-adjustment processing is described in the following subsections.

Required Enrollment Elements

Plan risk scores used to adjust capitation payments are updated on a quarterly basis. To accomplish this, enrollment data are received on the first day of the application quarter to be used within the quarterly risk scoring process. This information is provided by the Commonwealth to the PH-MCOs to document the members who have enrolled in the PH-MCO and to assess PH-MCO capitation payment levels. The following elements are used for the risk-adjustment process:

- Recipient Medicaid ID number

- PH-MCO code

- Date of birth

- Gender

- Category of assistance

- Program status code

- Payment begin date

- Payment end date

The above elements are used to determine each member's rate cell, age (demographic category), region, age and gender group and PH-MCO, based on the first day of the application quarter.

The enrollment data elements are used strictly for the quarterly PH-MCO plan factor update. The remaining data elements are used to calculate the individual risk scores, which is currently done on a semi-annual basis.

Required Eligibility Elements

A historical eligibility file is used for the semi-annual risk-adjustment processing and the related reporting. The following data elements within the file are needed for the risk-adjustment process:

- Recipient Medicaid ID number

- County of residence

- Rate cell

- Date of birth

- Gender

- PH-MCO code

- Start date of eligibility

- End date of eligibility

- Medicare Part A indicator

- Medicare Part B indicator

Using the start and end dates associated with each eligibility segment, the number of months of eligibility are calculated for each recipient, known as member months (MMs). The calculated MMs are then used to determine if an individual has a sufficient Medicaid eligibility within the study period to receive a risk score.

The other elements within the eligibility file are used to assign each recipient to a demographic category, rate cell and region, or to identify recipients with Medicare coverage (Part A or Part B) who will not be assigned a risk score. The demographic category is determined by calculating the member's age at the end of the study period. Each member is assigned to a rate cell and region

based on the last known information available within the study period to support the semi-annual reporting processes.

Required Medical Data Elements

The diagnostic information collected for risk assessment includes FFS claims and encounter data, which are collected approximately four months following the end of the study period. The encounter data incorporate information from both PH-MCOs and BH-MCOs. For the purpose of risk assessment, diagnostic information is used to classify individuals into the diagnostic disease categories within the CDPS+Rx model. The files used to obtain a recipient's diagnostic information contain the following types of information, which are needed for the risk-assessment process:

- Recipient Medicaid ID number

- PROMISe Internal Control Number (ICN)

- PROMISe disposition (whether the record passed or failed required edits)

- Detail line number (non-inpatient services only)

- Begin date of service

- End date of service

- Diagnostic (ICD-10) codes

- Procedure (CPT-4 or Healthcare Common Procedure Coding System) code and modifiers

- Revenue code(s)

Only those records with a beginning date of service (header or detail record) within the selected 12-month study period are incorporated into the analysis.

The identification of the CDPS+Rx diagnostic disease conditions is based on the ICD-10 codes present in the data (claims and encounters), where each record can have multiple ICD-10 diagnosis codes. Prior to November 2008, the data extracts provided to support the risk-adjustment process contained up to nine diagnosis codes. In November 2008, the number of diagnostic positions collected within the data extracts was increased to 25 for facility records. In December 2016, the number of diagnostic positions collected within the data extracts was increased to 12 for professional records. As a result of these changes, the number of diagnoses used in the current risk assessment can include up to 12 diagnosis codes for professional services and 25 diagnosis codes for facility records.

The CDPS+Rx software only uses the primary and secondary diagnoses to classify individuals into chronic disease categories. To allow for additional diagnoses into the CDPS+Rx analysis, records are created where all fields have the same values as the initial record, except for the diagnostic codes, which now represent the diagnoses in the third and fourth position. This process is continued until all available diagnoses are included in the claims/encounter data. Table 5.1 is a simplified illustration of a record with seven diagnoses (Diag) prior to reformatting:

TABLE 5.1 – SAMPLE ENCOUNTER RECORD

MEDICAID ID	DIAG1	DIAG2	DIAG3	DIAG4	DIAG5	DIAG6	DIAG7
00001	O10912	O99842	O99280	E079	O99342	F329	Z3A20

Below is an illustration of the modification necessary to use all of the available diagnostic information for the record in Table 5.1:

TABLE 5.2 – SAMPLE ENCOUNTER RECORD (REFORMATTED)

MEDICAID ID	DIAG1	DIAG2
00001	O10912	O99842
00001	O99280	E079
00001	O99342	F329
00001	Z3A20	

Note that the actual position of the diagnosis is irrelevant to the CDPS+Rx model. Using the above methodology, as illustrated in Table 5.2, all available diagnostic information will be used regardless of the position a diagnosis originally held.

Required Pharmacy Data Elements

Pharmacy data are used to classify individuals into the pharmacy disease categories within the CDPS+Rx model. These data are collected simultaneously with the other record types. The identification of pharmacy disease categories is based on the NDCs present in the pharmacy encounters. Starting in July 2012, pharmacy claims were incorporated into the disease classification process. The pharmacy data used to obtain a recipient's pharmacy usage contain the following types of information, which are needed for the risk-assessment process:

• Recipient Medicaid ID number

• PROMISe ICN

• PROMISe disposition

• Date of service

- NDC

Similar to the diagnostic data processing, only a single occurrence of an NDC is required to classify a person into a pharmacy disease category. Also, only records with a date of service within the selected 12-month study period are included in the risk-assessment analysis.

DATA VALIDATION

Prior to processing the data through the risk-adjustment process, each source of data is reviewed and validated. The following subsections describe the various components of the data validation process.

Control Total Verification

Upon receipt of the data, the record counts for each file are compared to the control totals submitted by the Commonwealth. Control totals are necessary to determine that a complete transfer of the data has been achieved.

Frequency Validations

A frequency analysis is performed on each file for the fields used in the risk-adjustment processing to provide a listing of unique values associated with each variable and the presence of each value. This can be used to indicate whether critical information is missing or yields invalid results. For a field with a large number of values (i.e., diagnosis codes), an evaluation is performed on how often the field is populated and the volume of invalid values. This includes an evaluation of diagnosis codes by position prior to the reformatting of the data for CDPS+Rx processing. The results of the analyses are then compared to results from prior risk assessments for reasonableness.

Volume Charts

Shortly after the study period concludes and before the finalization of the data collection, the volume of the PH-MCO encounter data is reviewed on a per recipient basis. This information is then incorporated into charts that show each PH-MCO's encounter volume by month for each record type (inpatient, outpatient, professional and pharmacy), which are referred to as the interim encounter volume charts. In addition to producing the charts, observations about the charts are also provided that indicate possible deficiencies in the encounter data. The interim volume charts, record counts and observations are sent to the PH-MCOs for review and to address any potential issues. This process of producing interim volume charts before final data submissions was introduced to give each PH-MCO a chance to address any data deficiencies before the data are finalized, thereby improving the data submissions used for the risk-assessment process.

Once the encounter data submission deadline has passed, the final data are received, validated and the volume of PH-MCO encounter data is reviewed again. Final volume charts and record counts are produced and distributed to the PH-MCOs for informational purposes. A sample volume chart is provided in Appendix D.1.

Feedback Files

After the data submission cut-off date for the risk-assessment process, each PH-MCO is provided with a copy of the encounter records received by Mercer to ensure that all data submitted to PROMISe by the cut-off date are contained within the file. Once the PH-MCOs receive the data, they are given 10 business days to reconcile their claims data with the information in the feedback files, provide feedback of any discrepancies and confirm that their RAR data have no deficiencies. Once the PH-MCOs have reconciled their data with the data in the feedback files, the PH-MCOs are required to send an email to a designated mailbox indicating that the reconciliation has been completed and describing the results or any concerns. If discrepancies are found, the PH-MCOs should submit specific information regarding the findings, including record counts and a file containing the PROMISe ICNs for the records in question. These records are then reviewed and a determination is made regarding the inclusion of these records within the risk-assessment process.

DATA PROCESSING FOR RISK SCORING

Prior to each risk assessment, a decision is made regarding the types of data that will be used for disease condition identification. As a result, some data have been excluded from risk scoring because the diagnostic information contained is questionable or because more recent information is available regarding the provided service. The following subsections describe the data exclusions that have evolved over time.

Laboratory and Radiology Exclusion

Laboratory and radiology data may not be appropriate for disease classification. Often times, diagnoses submitted on laboratory and radiology claims are indicative of the condition being tested rather than the member's diagnosis, thus producing a false positive disease classification. To reduce the number of chronic conditions being falsely identified, diagnostic laboratory and radiology services rendered in a non-inpatient setting are removed from disease classification. A list of procedure codes and revenue codes used for these exclusions is provided within the methodology letter that accompanies each individual risk score update.

Newborn Records Under the Mother's Medicaid ID

Newborn claims and encounters are a challenge for the PH-MCOs because newborns are not assigned a Medicaid ID until approximately 30 days after the birth event. The PH-MCOs may reimburse providers for newborn services under the mother's Medicaid ID until the newborn is assigned a Medicaid ID. When submitting encounter records to the Commonwealth, encounters are supposed to be held by the PH-MCOs until receipt of the newborn's Medicaid ID, but this does not always occur properly. In order to avoid incorrectly assigning the disease condition to the mother instead of the child, all encounters with live birth diagnosis codes (regardless of position) of Z38.00, Z38.2, Z38.01, Z38.1, Z38.30, Z38.5, Z38.31, Z38.4, Z38.61, Z38.63, Z38.65, Z38.68, Z38.8, Z38.62, Z38.64, Z38.66, Z38.69 or Z38.7, and the age of the recipient is less than one as of the date of service, are removed from risk scoring processing.

Voided and Adjusted Records

An original encounter that was submitted to DHS could be retracted or voided by MCOs for multiple reasons. To void an encounter, the MCOs submit the encounter with an adjustment code of "8," which is tied to the original encounter. During the void removal process, both the original and the voided encounter are removed from the risk-assessment data. In some cases, the original encounter is adjusted because of a subsequent change identified in the encounter. To adjust an encounter, the MCOs submit the encounter with an adjustment code of "7" tied to the original encounter. During the adjustment process, the newly adjusted encounter replaces the original encounter.

Accepted Only Records

Currently, only PH-MCO encounter records that pass the required PROMISe edits (DHS-accepted records) are included in the risk-assessment process. This refinement was introduced to encourage PH-MCOs to improve the quality of their encounter submissions, thus allowing the encounter data to be used to support other HealthChoices initiatives. Prior to implementing this policy, encounter volume charts were provided to the PH-MCOs that contained the results when all records were used in comparison to when only those records that passed the required PROMISe edits, referred to as accepted records, were used. The Commonwealth evaluates the PROMISe edits and, in certain circumstances, determines that some edits are not working properly. Encounter records that are denied due to these specific edits are included in data used for risk scoring. When this occurs, the Commonwealth may change the disposition of an edit to pay and list status, thus allowing for records with that particular edit failure to be accepted in the future.

Manage Care Organization-Altered Records

DHS has released an MCO operations memorandum (MCOPS Memo #06/2010-011), which disallows any records that were altered, adjusted or submitted by an MCO without supporting documentation from the submitting provider who originated the medical service in the form of a claim. As a result of this policy, MCOs are specifically not permitted to alter any diagnosis codes on a record prior to submission to DHS as an encounter. This exclusion should be applied by the PH-MCOs prior to submitting encounter data to PROMISe and is subject to audit.

PHYSICAL HEALTH-MANAGED CARE ORGANIZATION ENCOUNTER DATA MONITORING AND MANAGEMENT

In addition to reviewing the encounter volume charts and the feedback files, the PH-MCOs should be proactively monitoring encounter submissions and evaluating the quality and completeness of data. The following are some recommendations regarding encounter data management for PH-MCO consideration.

Encounter Data Onsite Reviews

DHS and Mercer have been conducting various onsite reviews of the PH-MCOs to evaluate overall encounter data operations. These onsite reviews began in 2003, and continue to occur with the most recent being in February of 2019. Encounter data are used by DHS for various projects, including risk adjustment and financial report verification, and it is critical that PH-MCOs appropriately report the services rendered in encounter data. A byproduct of these reviews is a summarized list of the potential data improvement opportunities, which is provided in Appendix E. This list may be helpful as PH-MCOs develop or review a strategic plan for improving encounter submissions.

PROMISe Response Files

After a PH-MCO submits a data file to the PROMISe data system, the Medicaid Management Information System (MMIS) will either accept or reject the submitted file. Once the file is accepted or rejected, a Health Insurance Portability and Accountability Act (HIPAA)[6] transaction 999 is sent directly to the PH-MCO indicating whether the file was accepted or not. The accepted files pass through to PROMISe. PH-MCOs should monitor these transaction records to correct and resubmit non-accepted files.

Once the encounters are successfully loaded, they are processed by PROMISe using modified FFS edits to accommodate encounter data processing. The PH-MCOs receive 277u response files on a weekly basis, which contains the PROMISe ICN for each encounter. This identifies whether an individual encounter was accepted, denied or suspended by PROMISe. The PH-MCO is then required to correct any identified issues with the denied and suspended records and resubmit the encounters. This process should be repeated until the encounter is placed into an accepted status.

The PH-MCOs should track responses and consistently load the PROMISe ICNs into the data warehouse. Such tracking will help the PH-MCO identify any issues with encounter submissions and ensure that all appropriate data were submitted to the Commonwealth to support risk assessment and other analyses. This also expedites the resolution of any issues by giving the Commonwealth, the PH-MCO and Mercer a common claim identifier.

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[6] Health Insurance Portability and Accountability Act

6

INDIVIDUAL RISK SCORE DEVELOPMENT

The calculation of individual risk scores for each recipient is a time-intensive process. The data are collected approximately four months following the end of the study period to allow sufficient time to collect complete diagnostic and pharmacy data. The data are then validated by the PH-MCOs and Mercer. Once the data are approved for risk-assessment purposes, the data are processed through the CDPS+Rx model. Reports are then generated to allow DHS and the PH-MCOs to validate the individual risk score results. Each of these steps are performed on a semi-annual basis, where each risk assessment is named after the application period (calendar year, followed by an "a" to indicate the first six months of the year or a "b" to indicate the last six months of the year). For example, the 2019b risk scores are used to adjust the July through December 2019 capitation rates. This section describes the semi-annual development of the individual risk scores.

DATA COLLECTION AND VALIDATION

Eligibility, encounter data and claims information are collected every six months to support the semi-annual risk-assessment process. The encounter data include both the PH-MCO encounters and the BH-MCO encounters. Prior to collecting the data, the PH-MCOs are notified of the date that the encounters have to be submitted to PROMISe in order to be included within the risk assessment. The data are then collected, validated and prepared for CDPS+Rx processing, as described in greater detail within Section 5.

SCORING CRITERIA

Certain criteria exist in order to establish whether or not a recipient will be given a risk score. According to researchers at UCSD, recipients tend to accumulate diagnoses rapidly through the first six months of eligibility. After the initial six months, the accumulation rate drops off. To reduce the likelihood of unreported diagnoses, DHS has adopted a CDPS+Rx scoring methodology policy that only includes recipients with at least six months of Medicaid eligibility (not necessarily continuous) in the selected study period. This policy alleviates the potential of underestimating an acuity factor due to unreported disease conditions.

Recipients who are dually eligible for Medicare and Medicaid typically have underreported data. This generally occurs because a record is only submitted to the Commonwealth or the PH-MCOs when Medicaid is financially responsible for a portion of the service beyond the amount paid by Medicare. Since Medicare payment is often considered full reimbursement, Medicaid

receives a relatively small subset of the claims experience that contains the requisite data to support the risk scoring process. As a result of this underreporting, dual eligibles are not included in the scoring criteria MM calculation. For the purposes of risk assessment, dual eligibles are defined as any recipient with Medicare Part A, Part B or Part D coverage regardless of their rate cell.

In summary, Medicaid-only members who meet the six or more months of Medicaid eligibility criteria are considered credible for the purpose of risk assessment. These members are referred to as scored recipients.

CDPS+RX PROCESSING

Using the eligibility, claims and encounter data for the selected 12-month study period, each scored recipient is processed through the CDPS+Rx model, using the Pennsylvania-specific cost weights. The resulting output is a list of Medicaid recipients, the CDPS+Rx model characteristics (demographic and disease, including any child interaction factors) and acuity factors.

Table 6.1 below provides an acuity factor development example, using the PA-specific cost weights that are provided in Appendix C:

TABLE 6.1 – SAMPLE ACUITY FACTOR DEVELOPMENT FOR A MALE SUPPLEMENTAL SECURITY INCOME (SSI) RECIPIENT, AGE 17

COMPONENT	CATEGORY	SSI COST WEIGHT
Demographic	Male ages 15 to 24	0.017
Diagnostic	Metabolic, medium	0.811
	Cardiovascular, medium	0.931
Pharmacy	MRX Diabetes	0.212
Child Interaction Factors	Cardiovascular, medium	0.470
Acuity Factor (sum of cost weights)		2.441

A recipient's age, rate cell and PH-MCO enrollment may change over time. To account for these changes, the recipient's assignment into a rate cell and demographic category will be reevaluated as necessary. Currently, these characteristics are evaluated on the first day of the application quarter. To support the quarterly PH-MCO risk score (plan factor) development for each rate cell, a set of five acuity factors is calculated for each recipient — three for the TANF model (adult ages 19+, adult ages 21+ and child ages 0–20), and two for the SSI model (adult and child). This allows the flexibility to choose the appropriate score for an individual based on their age and rate cell on the first day of the application quarter.

PREVALENCE REPORT

A summary report, referred to as a prevalence report, is provided to each PH-MCO with the distribution of members across CDPS+Rx categories. One element of the report is the CDPS+Rx distribution for the total and scored population when only the PH-MCO's data are used for the disease classification. The PH-MCOs are encouraged to run their own data through the CDPS+Rx model and compare the membership distributions to the figures provided within the prevalence report. Table 6.2 provides an excerpt from a prevalence report when only the XYZ Health Plan's (XYZ) data are used for disease classification:

TABLE 6.2 – SAMPLE PREVALENCE REPORT EXCERPT – ONLY XYZ'S DATA

CDPS+RX CATEGORY	COUNT OF TOTAL RECIPIENTS (A1)	PERCENT OF TOTAL RECIPIENTS (A2)	COUNT OF SCORED RECIPIENTS (B1)	PERCENT OF SCORED RECIPIENTS (B2)
Age Subtotal	35,000	100.0%	30,000	100.0%
Psychiatric				
High	71	0.2%	70	0.2%
Medium	206	0.6%	203	0.7%
Medium low	884	2.5%	854	2.8%
Low	1,251	3.6%	1,216	4.1%
MRX Depression/ Psychosis/Bipolar	2,668	7.6%	2,539	8.5%

The prevalence report also contains CDPS+Rx membership distributions when all data are used in the risk scoring process, in addition to the distributions when only the PH-MCO's data are used. This additional data could include FFS claims, BH-MCO encounters and PH-MCO encounters submitted from a different PH-MCO. The CDPS+Rx membership distributions are also provided separately for the PH-MCO and for the total zone. Table 6.3 provides an excerpt from a prevalence report when data from all sources are used for disease classification:

TABLE 6.3 – SAMPLE PREVALENCE REPORT EXCERPT – ALL DATA SOURCES

CDPS+RX CATEGORY	COUNT OF XYZ SCORED RECIPIENTS (C1)	PERCENT OF XYZ SCORED RECIPIENTS (C2)	COUNT OF ZONE-WIDE SCORED RECIPIENTS (D1)	PERCENT OF ZONE-WIDE SCORED RECIPIENTS (D2)
Age Subtotal	30,000	100.0%	126,696	100.0%

CDPS+RX CATEGORY	COUNT OF XYZ SCORED RECIPIENTS (C1)	PERCENT OF XYZ SCORED RECIPIENTS (C2)	COUNT OF ZONE-WIDE SCORED RECIPIENTS (D1)	PERCENT OF ZONE-WIDE SCORED RECIPIENTS (D2)
Psychiatric				
High	211	0.7%	786	0.6%
Medium	518	1.7%	2,104	1.7%
Medium low	2,178	7.3%	9,056	7.1%
Low	1,266	4.2%	5,165	4.1%
MRX Depression/ Psychosis/Bipolar	1,642	5.5%	6,309	5.0%

Based on the figures in the above example, 23.7% of the zone-wide scored population (30,000/126,696) was enrolled with XYZ for at least one month. The disease condition prevalence reported in Column C2 for XYZ has changed substantially from the values reported in Column B2 of Table 6.2. An increase is occurring for the Psychiatric categories that rely on diagnoses for disease classification because the diagnoses from the BH-MCO encounters, in addition to FFS claims and encounters from the other PH-MCOs, are being used to identify additional psychiatric conditions in the above table. The MRX Depression/Psychosis/Bipolar category that uses pharmacy data to supplement the diagnostic classification process is decreasing with the use of all data sources because more recipients are being identified with a psychiatric condition based on the diagnoses. This relationship is expected since a recipient can only be classified into a single Psychiatric category. The data in Table 6.3 also indicate that XYZ has a higher prevalence of overall psychiatric conditions than the zone-wide population (19.4% compared to 18.5%).

For prevalence reporting purposes, age and model assignment are determined at the end of the study period. For each zone, the PH-MCO receives four prevalence reports containing the results by rate cell: TANF-MAGI Ages 1–20, TANF-MAGI Ages 21+, Disabled-BCC Ages 1+ and the Newly Eligible rate cells (combined).

A sample prevalence report is provided in Appendix D.2.

ESTIMATED FINANCIAL IMPACT REPORT

The Estimated Financial Impact report is distributed on a semi-annual basis for PH-MCOs to better understand the implications of the updated acuity factors. The updated risk-assessment process could result in plan factor changes due to the addition of acuity factors for newly scored recipients, changes in measured risk for previously scored recipients and the incorporation of process revisions. To better understand the financial implications of the risk score update, plan factors are

calculated using the prior period's acuity factors and the upcoming period's acuity factors for the same application quarter. A summary of the results are distributed to the PH-MCOs for informational purposes. Actual changes in plan factors will vary each application quarter as enrollment patterns change.

A sample Estimated Financial Impact report is provided in Appendix D.3.

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PHYSICAL HEALTH-MANAGED CARE ORGANIZATION RISK SCORE DEVELOPMENT

Unlike the individual acuity factor development, the calculation of PH-MCO plan factors is not a time-intensive process, which allows for more frequent updates. Currently, the plan factors that are used to adjust the HealthChoices capitation rates are updated quarterly, which accounts for any enrollment changes, including any shifts in enrollment between PH-MCOs that occur.

The goal of the plan factor development is to calculate final plan factors to apply to the portion of the base capitation rates subject to risk adjustment by PH-MCO, region and rate cell. The resulting capitation rates are then used to compensate each PH-MCO based on the overall health risk of their population.

The following is the process used to calculate PH-MCO plan factors:

- Assign recipients to a PH-MCO, region, rate cell and age/gender group (note: the age/gender groups are defined later in this section).

- Assign appropriate acuity factor to each recipient who has an acuity factor.

- Make assumptions about the acuity of the unscored recipients.

- Calculate each PH-MCO's unadjusted plan factor by combining scored and unscored recipient risk scores for each PH-MCO by region and rate cell.

- Adjust each PH-MCO's resulting unadjusted plan factor for budget neutrality by region and rate cell.

This section describes the plan factor development and the corresponding reports that are shared with the PH-MCOs.

RECIPIENT ASSIGNMENT AND ACUITY FACTOR SELECTION

Using the provided enrollment data, each recipient is assigned to a rate cell, region, age/gender group and PH-MCO based on the first day of the application quarter. After assigning the recipients to the appropriate PH-MCO, each recipient who has an acuity factor from the individual acuity factor

development is assigned an acuity factor based on their rate cell. The table below shows the applicable acuity factor used for each rate cell:

TABLE 7.1 – ACUITY FACTOR SELECTION BY RATE CELL

RATE CELL	ACUITY FACTOR MODEL USED
TANF-MAGI Ages 1–20	TANF Child
TANF-MAGI Ages 21+	TANF Adult (ages 21 or older)
Disabled-BCC Ages 1+	SSI Child or SSI Adult
Newly Eligible (both rate cells)	Newly Eligible

Since a recipient's age may also change in any given quarter, the demographic component of the acuity factor is updated to reflect the recipient's age on the first day of the application quarter. Once completed, the demographic component of the acuity factor is added to the other model components for each recipient, which includes diagnostic disease categories, pharmacy disease categories and child interaction factors.

UNSCORED ASSUMED RISK SCORE

During the PH-MCO risk score development process, not all recipients have an individual acuity factor. These recipients can include recipients new to Medicaid, dual eligibles and recipients with less than six months of eligibility within the historical study period. To measure the health risk of each PH-MCO, an assumption about these unscored recipients is required. This subsection describes the various unscored assumptions and the circumstances that each scenario would apply to a PH-MCO's plan factor development.

Age/Gender Groups

To assign assumed risk scores to the unscored recipients, each PH-MCO's population is split into age/gender groups as shown below in Table 7.2, because the underlying health risk of these age/gender groupings are significantly different. Within each of the age/gender subpopulations for a PH-MCO, there are scored and unscored recipients. If the PH-MCO's scored population is sufficiently credible, an assumption is made that the PH-MCO's unscored members have the same health risk as the PH-MCO's scored members within each age/gender group. Specifically, a PH-MCO's unscored recipients are assigned the average risk score of the PH-MCO's scored recipients, separately by age/gender group:

TABLE 7.2 – AGE/GENDER GROUP SPLITS BY RATE CELL

TANF-MAGI AGES 1–20	TANF-MAGI AGES 21+	DISABLED-BCC AGES 1+	NEWLY ELIGIBLE AGES 19–44	NEWLY ELIGIBLE AGES 45–64
Male and Female 1–4	Male 21–30	Male and Female 1–4	Male 19–30	Male and Female 45+
Male and Female 5–13	Female 21–30	Male and Female 5–13	Female 19–30	
Male 14–20	Male 31–44	Male and Female 14–20	Male 31–44	
Female 14–20	Female 31–44	Male and Female 21–30	Female 31–44	
	Male and Female 45+	Male and Female 31–44		
		Male and Female 45+		

Splitting the population out by age and gender groups takes into account and adjusts for potential differences in the mix of age and gender categories between the scored and unscored populations for a PH-MCO. Also, since a PH-MCO's unscored recipients receive the average risk score for that PH-MCO's appropriate scored recipients, this assumption implies that PH-MCOs attract recipients with similar types of health risk in its population over time. This assumption is made for each PH-MCO at the region, rate cell and age/gender group level.

Table 7.3 provides an example of the unscored assumption when each PH-MCO's scored population is fully credible:

TABLE 7.3 – SAMPLE UNSCORED PLAN FACTOR ASSUMPTION – FULL CREDIBILITY

TANF-MAGI AGES 1–20	XYZ HEALTH PLAN		ABC HEALTH PLAN	
	SCORED	UNSCORED	SCORED	UNSCORED
Age/Gender Group				
Male and Female 1–4	19,000	400	13,000	800
Male and Female 5–13	34,000	3,000	26,700	600
Male 14–20	7,000	300	4,000	140
Female 14–20	8,000	470	2,000	120
Average Risk Scores				
Male and Female 1–4	1.2750	**1.2750**	1.3236	**1.3236**

TANF-MAGI AGES 1–20	XYZ HEALTH PLAN		ABC HEALTH PLAN	
	SCORED	UNSCORED	SCORED	UNSCORED
Male and Female 5–13	0.8975	**0.8975**	1.0010	**1.0010**
Male 14–20	0.9365	**0.9365**	1.0696	**1.0696**
Female 14–20	1.0222	**1.0222**	1.1565	**1.1565**

In Table 7.3 above, each PH-MCO's population is split into the age/gender groups applicable for the TANF-MAGI Ages 1–20 rate cell. In each case for all PH-MCOs, the PH-MCO's scored population is credible enough to use for the unscored acuity factor assumption. All unscored recipients in this example receive the average risk score developed from the PH-MCO's scored population, separately by age/gender group. The assumed plan factors for the unscored recipients are listed in **bold**.

Low Credibility Situations

In some cases, the scored population is not sufficiently credible to use as a predictor of the health risk for the unscored population. These situations occur when the scored population has limited months of eligibility within the study period or when the scored population represents a small proportion of the total population. To account for these low credibility situations, a determination is made regarding the credibility of the PH-MCO's scored population. When a PH-MCO's scored population is deemed to be 100% credible, the unscored recipients are assigned the average risk score calculated from the PH-MCO's scored recipients, as described previously. When a PH-MCO's scored population is deemed to be 0% credible, the unscored recipients are assigned the average risk score from the region-wide (All PH-MCOs') scored recipients. When a PH-MCO's scored population is deemed to be between 0% and 100% credible, the unscored recipients are assigned a blend of the PH-MCO's average risk score and the region-wide average risk score. The credibility determination and unscored risk score assumption is evaluated for each PH-MCO, region, rate cell and age/gender group combination.

To determine the amount of credibility to assign the PH-MCO's scored population, the following metrics are used:

•   The number of months a PH-MCO's scored population was eligible during the study period (referred to as scored MMs).

•   A MM weighted scored percentage calculated by dividing the scored MMs by 12 times the PH-MCO's total population (scored and unscored recipients). This value is referred to as the MM scored percentage.

Using these metrics, the credibility percentages can be found in the PH-MCO risk score credibility grid (found in Appendix F). The following table outlines the specific criteria used to determine the credibility of a scored population:

TABLE 7.4 – CREDIBILITY CRITERIA

SCORED POPULATION RISK SCORE CREDIBILITY	SCORED POPULATION CRITERIA
0% Credible	≤ 611 scored MMs OR ≤ 25% MM scored percentage
100% Credible	≥ 1,200 scored MMs AND ≥ 50% MM scored percentage
Found in Credibility Table	All other scenarios

It should be noted that the PH-MCO risk score credibility grid indicates the credibility percentage or proportion of the PH-MCO's average risk score that is used to determine the assumed risk score for the unscored population. The remaining credibility is given to the region-wide scored recipients' aggregate plan factor. Both credibility percentages sum to 100%.

Table 7.5 illustrates the unscored assumption calculation when the scored population is not 100% credible to be used as the basis for the unscored assumption. The example shown below illustrates two age/gender groups within the TANF-MAGI Ages 1–20 rate cell. In application, this methodology is applied to all applicable age/gender groups for each PH-MCO, region and rate cell:

TABLE 7.5 – SAMPLE UNSCORED HEALTH RISK ASSUMPTION – LOW CREDIBILITY

TANF-MAGI AGES 1–20	MALE AND FEMALE AGES 1–4				MALE AND FEMALE AGES 5–13			
	Scored	Unscored	Scored MMs	Max MMs	Scored	Unscored	Scored MMs	Max MMs
Recipients								
PH-MCO 1	25	50	275	900	400	600	4,600	12,000
PH-MCO 2	175	100	1,925	3,300	800	400	9,040	14,400
All PH-MCOs	200	150	2,200	4,200	1,200	1,000	13,640	26,400
Average Risk Scores								
PH-MCO 1	1.0500	**1.0938**	N/A	N/A	0.8956	*0.9247*	N/A	N/A
PH-MCO 2	1.1000	1.1000	N/A	N/A	0.9864	0.9864	N/A	N/A
All PH-MCOs	1.0938	1.0979	N/A	N/A	0.9561	0.9494	N/A	N/A

Using the figures from Table 7.5, PH-MCO 1 enrolled 25 scored recipients in the Male and Female Ages 1–4 group, which accounted for 275 MMs within the study period. The maximum MMs for PH-MCO 1 in this group (scored and unscored) of 900 was calculated by summing the scored and unscored recipients in this age/gender group (25+50) and multiplying by 12.

Based on the Table 7.5 example, PH-MCO 1's scored population is not fully credible for both of their displayed age/gender groups. Their scored Male and Female Ages 1–4 populations is 0% credible since it has less than 611 scored MMs. Therefore, PH-MCO 1's 50 unscored recipients in this group receive an assumed risk score of 1.0938, which is the region-wide average risk score for this age/gender group. This assumption is listed in **bold** within the table.

Continuing with the Table 7.5 example, PH-MCO 1's scored recipients in the Male and Female Ages 5–13 populations is not 100% credible since its MM scored percentage (4,600/12,000) is less than 50%. From the PH-MCO risk score credibility grid in Appendix F, 4,600 scored MMs and a MMs scored percentage (rounded down) of 38% indicates 52% credibility to the PH-MCO's average risk score. Therefore, PH-MCO 1's 600 unscored recipients in this age/gender group receive an assumed risk score of 0.9247 (0.52 x 0.8956 + 0.48 x 0.9561). This assumption is listed in ***bold italics*** within the table. Last, PH-MCO 2 has full credibility in both its age/gender populations based on the figures presented in Table 7.5. Therefore, PH-MCO 2's unscored recipients receive the average risk score of PH-MCO 2's scored recipients, separately by age/gender group.

FINAL UNADJUSTED PLAN FACTOR DEVELOPMENT

Once risk scores have been assigned to the unscored recipients, final unadjusted plan factors are calculated by PH-MCO, region and rate cell. To calculate the final unadjusted plan factors for all non-newborn rate cells, a weighted average of the risk scores for each subpopulation (defined by scored and unscored by age/gender group) is calculated by weighting each subpopulation by the total number of recipients in each group.

Table 7.6 is a continuation of Table 7.3 and provides an example of the final unadjusted plan factor calculation for a rate cell:

TABLE 7.6 – SAMPLE UNADJUSTED PLAN FACTOR CALCULATIONS

TANF-MAGI AGES 1–20	XYZ HEALTH PLAN			ABC HEALTH PLAN		
	SCORED	UNSCORED	TOTAL	SCORED	UNSCORED	TOTAL
Recipients						
Male and Female 1–4	19,000	400	19,400	13,000	800	13,800
Male and Female 5–13	34,000	3,000	37,000	26,700	600	27,300

TANF-MAGI AGES 1–20	XYZ HEALTH PLAN			ABC HEALTH PLAN		
	SCORED	UNSCORED	TOTAL	SCORED	UNSCORED	TOTAL
Male 14–20	7,000	300	7,300	4,000	140	4,140
Female 14–20	8,000	470	8,470	2,000	120	2,120
Total Recipients	68,000	4,170	72,170	45,700	1,660	47,360
Risk Scores						
Male and Female 1–4	1.2750	1.2750		1.3236	1.3236	
Male and Female 5–13	0.8975	0.8975		1.0010	1.0010	
Male 14–20	0.9365	0.9365		1.0696	1.0696	
Female 14–20	1.0222	1.0222		1.1565	1.1565	
Composite Score	1.0217	0.9506	**1.0176**	1.1056	1.1735	**1.1080**

In Table 7.6 above, each PH-MCO's final unadjusted plan factor is calculated by averaging the risk scores for each age/gender group, weighted by the number of recipients in each group. All final unadjusted plan factors are listed in **bold**.

BUDGET NEUTRALITY ADJUSTMENT

The CDPS+Rx model does not necessarily produce a population average CDPS+Rx factor of 1.0000. Deviations from a 1.0000 population occur because the weights are calibrated using the entire HealthChoices experience based on a combination of zones and rate cells, and the population experience changes with each risk-adjustment update. To simplify the interpretation and application of the plan factor results, the final unadjusted plan factors are adjusted by the population average. The intent of this adjustment is to recalibrate all plan factors to produce a population average of 1.0000. This adjustment yields the following results:

- Adjusted plan factors of 1.0000 have average selection

- Adjusted plan factors greater than 1.0000 have adverse selection

- Adjusted plan factors less than 1.0000 have positive selection

This adjustment is referred to as the budget neutrality adjustment because this step ensures that the risk-adjustment methodology does not result in unintended reductions or increases in total capitation payments across the HealthChoices program.

To calculate the population average for all PH-MCOs combined, a weighted average is calculated where each PH-MCO's final unadjusted plan factors are weighted by their number of total recipients. Table 7.7 provides an example of the budget neutrality adjustment and the resulting final plan factors:

TABLE 7.7 – SAMPLE FINAL (BUDGET NEUTRAL) PLAN FACTORS

PH-MCO	TOTAL RECIPIENTS TANF-MAGI AGES 1–20	FINAL UNADJUSTED PLAN FACTOR	FINAL (BUDGET NEUTRAL) PLAN FACTOR
XYZ Health Plan	72,170	1.0176	0.9660
ABC Health Care	47,360	1.1080	1.0518
All PH-MCOs	119,530	1.0534	1.0000

In the example above, the health risk prior to the budget neutrality adjustment is 1.0534 for the overall population (All PH-MCOs), which was calculated by weighting each PH-MCO's final unadjusted plan factor by the total recipients in the second column of Table 7.7. To calculate the final (budget neutral) plan factors, each final unadjusted plan factor is divided by the overall (All PH-MCOs) plan factor of 1.0534.

This is the final step in the plan factor calculation. Once the budget neutrality adjustment has been applied, the resulting plan factor is then applied to the portion of the capitation rate subject to risk adjustment for the appropriate contract year, creating rates that compensate the PH-MCOs based on the health risk of the enrolled population.

PLAN FACTOR AND RISK-ADJUSTED RATES REPORTING

The PH-MCOs receive three reports that summarize the components of its plan factor development and resulting risk-adjusted rates for each region and rate cell combination.

The first report shows the development of the PH-MCO's unadjusted plan factors for each region and rate cell. This report lists the count of recipients, average risk score for the scored population, count of scored MMs, MM scored percentage, credibility percentages and region-wide average risk score, separately by age/gender group, region and rate cell. This report also shows the calculation of the assumed risk score for the unscored recipients and combines these with the average risk scores for the scored recipients to arrive at the final unadjusted plan factors. This report is referred to as the Unadjusted Plan Factor Development report. A sample Unadjusted Plan Factor Development report is provided in Appendix D.4.

The second report is referred to as the Risk-Adjustment Results Summary and includes the count of total recipients, count of scored recipients, unadjusted plan factors and budget neutral plan factors

by region and rate cell. These values are provided for the PH-MCO and for the overall population (All PH-MCOs). This report is not split out by age/gender group. A sample Risk-Adjustment Results Summary report is provided in Appendix D.5.

The third report is the Capitation Rate Summary that shows the calculation of the final risk-adjusted rates. This report displays the base capitation rate subject to risk adjustment, adjusted by the final plan factors applicable for the application quarter. In addition, any amounts not subject to risk adjustment (such as the amounts above the lowest contracted rate for a given region and rate cell and any additional exclusion amounts) are added to the risk-adjusted rates (as noted previously in Section 4, reduction amounts based on a PH-MCO's MLR are not added back into the final capitation rates). The final rate developed for the application quarter is then converted into a daily rate by multiplying the final rate by 3 and then dividing by the number of days in the application quarter. Reports are provided for each PH-MCO and contain rates for each region and rate cell combination applicable for that PH-MCO. A sample Capitation Rate Summary report is provided in Appendix D.7.

In addition to these reports, each PH-MCO receives an electronic file that contains the individual acuity factors for each scored recipient that contributed to the PH-MCO's plan factor development. Below is a listing of the fields that are contained within each acuity factor file:

- Recipient Medicaid ID number

- Rate cell

- Model

- Region

- Age

- Gender

- Acuity factor

- Age/gender group

- MMs

The PH-MCOs are encouraged to use this file to validate their plan factors.

8
ANTICIPATED REFINEMENTS

This manual details HealthChoices risk-adjustment policies and procedures in effect as of July 2019. The main goal of the risk-adjustment process is to best match payments made to the PH-MCOs to the overall health risk of their population. As such, DHS is continually reviewing the risk-adjustment policies and procedures, and making refinements to the process in an effort to better achieve this goal. This section details anticipated refinements to the risk-adjustment process that will likely happen in the near future. However, please note that due to potentially unforeseen scenarios that may occur, these anticipated refinements are not necessarily guaranteed to occur.

CHANGES IN PH-MCOS

Periodically, DHS re-evaluates the PH-MCOs in the HealthChoices program. This process can result in new PH-MCOs entering the program and existing PH-MCOs exiting the program. This potential change (also referred to as PH-MCO re-procurement) in PH-MCOs is anticipated in the future. In the event that changes occur with the PH-MCOs in the program, changes to the risk-adjustment policies and procedures may be necessary.

PENNSYLVANIA-SPECIFIC COST WEIGHTS

The cost weights utilized within the HealthChoices risk-adjustment process are currently being updated and should be implemented effective January 1, 2020. The update will incorporate changes to the risk mitigation programs within HealthChoices, specifically the removal of Hepatitis C drug therapies from the Specialty Drug Risk Mitigation arrangements, and the adoption of a uniform statewide preferred drug list, effective January 1, 2020.

APPENDIX A
HISTORICAL PERSPECTIVE

Since 2000, DHS has been developing and refining the risk-adjustment process used to adjust HealthChoices capitation payments. During this time, DHS has collected and acted on input from stakeholders. As a result, major policy changes have been implemented and the risk-adjustment process has been refined to reflect improvements in the risk-adjustment marketplace. This appendix of the manual provides the historical context for the decisions that have been made and outlines the collaboration that has occurred with the PH-MCOs throughout the years.

RISK-ASSESSMENT MODEL SELECTION

Prior to the implementation of risk-adjustment techniques, DHS evaluated possible risk-assessment models that could measure health risk using demographic indicators in addition to disease history. While many risk-assessment models exist, DHS elected to implement the only risk-assessment model that was specifically designed for Medical Assistance populations. CDPS is a diagnostic classification system that is available to Medicaid programs to make health-based capitated payments for TANF and Disabled Medicaid recipients.

In 2007, DHS reevaluated its original decision to use the CDPS model to risk adjust the PH-MCO capitation payments. As part of this reevaluation, DHS collected input from the PH-MCOs and compared the CDPS model to the other risk-assessment models that were being used to risk adjust capitation payments for government programs. After reviewing the collected information, the CDPS model was selected once again on the basis that the tool is publicly available without cost for all parties, it was developed specifically for low income and disabled populations and the model is the most commonly used in Medicaid. However, it should be noted that the model's developers now charge a licensing fee for the use of their risk-adjustment models.

During the 2007 evaluation of risk-assessment models, DHS and the PH-MCOs expressed an interest in using a combined model that incorporates both diagnoses and pharmacy utilization into the disease classification process. To support the development of a combined model, the Commonwealth contributed funding to UCSD that led to the creation of the CDPS+Rx model, which was used to risk adjust HealthChoices capitation payments starting in 2009.

In addition to model selection, DHS and Mercer have evaluated, and continue to evaluate aspects of the model to determine their appropriate application to the HealthChoices population, benefit

package and rate-setting environment. Adjustments to the CDPS and CDPS+Rx models have been made over time to address HealthChoices specific concerns, such as applying an additional process when a subset of data is not available or supplementing the data to better capture the prevalence of an AIDS/HIV diagnosis. Current refinements and adjustments are outlined throughout the manual and in semi-annual methodology letters.

ACTIVITIES PRIOR TO IMPLEMENTATION

Although choosing the CDPS and CDPS+Rx model was a major milestone in the design of the risk-adjustment program, the application to the HealthChoices program was reviewed to determine if any modifications were necessary to maximize the effectiveness of the risk-adjustment application. The key areas of consideration included the model's effectiveness on PA populations and stakeholder involvement.

Model Effectiveness on Pennsylvania Populations

Prior to implementing risk adjustment, a case study was performed to evaluate the effectiveness of the CDPS model on the PA populations. This study relied on the available FFS data, the national CDPS model and the rate cells that were in the HealthChoices program at the time of the study. This study compared the effectiveness of a risk-adjustment approach, where the capitation rates are adjusted to reflect the underlying risk of the population, to a single schedule of rates that are paid to all PH-MCOs. The results of the study are provided within the table below and reflect the rate structure in effect at the time of the study:

TABLE A.1 – RISK-ADJUSTMENT EFFECTIVENESS CASE STUDY RESULTS

RATE CELL	CDPS MODEL	RISK-ADJUSTMENT IMPROVEMENT[7]
TANF/Healthy Beginnings (HB) < 1 Year Old	TANF	12%
TANF 1 and Older	TANF	26%
HB 1 and Older	TANF	13%
SSI & Home Health (HH) without Medicare	Disabled	36%
SSI & HH with Medicare	Disabled	-3%
Federal GA	Disabled	34%
GA Categorically Needy-State Only	Disabled	27%
GA Medically Needy-State Only	Disabled	24%

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[7] This figure was measured by comparing the estimated cost for each recipient with and without risk adjustment to the actual costs for each recipient on an absolute value basis. The overall results were then summarized by rate cell and the value with risk adjustment was divided by the value without risk adjustment and subtracted from one.

The results above indicate that the CDPS risk-adjustment approach better matches payment to risk than the single schedule of rates for all populations, except the SSI & HH with Medicare rate cell (as indicated by their negative risk-adjustment improvement factor). The rationale behind this finding is that the CDPS model was developed to predict costs of Medicaid members using complete claims or encounter data generated by a comprehensive benefit package. In the case of the SSI & HH with Medicare population, the Medicaid expenditure data represent only a small portion of the total benefit package, with limited costs reported for hospital and ambulatory services. Another concern regarding the SSI & HH with Medicare population is whether or not consistent data reporting exists related to Medicare providers. As a result of the above case study, risk scores are not developed for recipients with both Medicare and Medicaid coverage.

IMPLEMENTATION PROTOCOL

The Commonwealth commenced preparation for risk-adjustment implementation in 2000. To maintain an open process, DHS held several stakeholder sessions with the PH-MCOs, encouraging them to comment and provide their questions on the process. In addition to providing technical assistance to the PH-MCOs, DHS scheduled two separate passes (dry runs) through the risk-adjustment process prior to the January 1, 2003, risk-adjusted rates implementation date for the SE and SW zones.

Mercer performed the first dry run to identify any data or application concerns that might have existed. It was performed a year in advance of implementation, which allowed ample time to make corrections to the data or application, if necessary. Based on the first dry run results and the input collected from the PH-MCOs, refinements were made to the process regarding the treatment of behavioral health conditions within the CDPS model.

The intent of the second dry run was to apply all the final policy decisions, data collection procedures and CDPS model adjustments to give an early indication of the possible financial impact that the PH-MCOs could experience.

The two dry runs, beginning a year in advance of the implementation date for the SE and SW zones, provided the PH-MCOs with additional time to make any necessary changes to their management, financial operations and encounter data collection.

Risk adjustment was implemented in the L/C zone on July 1, 2007. Since the L/C PH-MCOs were already familiar with the risk-adjustment process due to their experience with risk adjustment in the SE or SW zones, the level of effort to implement risk adjustment in the L/C zone was less involved. Six months prior to implementing risk adjustment in the L/C zone, a dry run of the risk-adjustment results and the corresponding reports were provided to the PH-MCOs.

Risk adjustment was implemented in the NE and NW zones on October 1, 2012 and March 1, 2013, respectively, which corresponds to the dates that NE and NW zones entered the managed care program. Since many of the NE and NW PH-MCOs were already familiar with the risk-adjustment

process due to their experience with risk adjustment in the SE, SW or L/C zones, the level of effort to implement risk adjustment in the NE and NW zones was less involved. (For more details, please see the HealthChoices Expansion section of Appendix A.)

PROCESS REFINEMENTS OVER TIME

The risk-adjustment process is continually being reviewed and refined. This is accomplished through various work groups, strategy meetings and input from the PH-MCOs. Prior to making any substantial change to the process, the PH-MCOs are presented with either the available options or the proposed process and are then given the opportunity to comment prior to the implementation of the change. Where applicable, the resulting decision and/or methodology associated with the process refinement are also presented to the PH-MCOs providing an opportunity to ask questions or provide feedback on the new approach.

The following is a summary of the more substantial methodology changes that have been applied since the implementation of the HealthChoices risk-adjustment program.

Data Lag

In order to allow for data runout, analysis of the risk scores and the PH-MCO's review of the final results, there is a lag between the study period used to develop the individual risk scores and the application period. The initial risk assessments were based on a data lag of 12 months, which allowed for the collection of the claims and encounter data six months after the study period.

To address the PH-MCO concerns that the underlying data used within the risk assessment should be closer to the application period, the data lag was reduced to seven months. This was accomplished by collecting the claims and encounter data approximately four months following the end of the study period and allowing less time for analysis and review of the risk-adjustment results. To support this process, it is critical that the PH-MCOs submit their encounter data on a regular basis to avoid any unexpected lapses in data submissions that could adversely impact the risk-adjustment process and any other DHS initiatives that rely on encounter data.

Frequency of Plan Factor Updates

The initial risk adjustments assumed that the historical member attraction patterns within the study period would be representative of the member attraction patterns within the application period. Under this approach, both the individual risk scores and the PH-MCO plan factors were updated on a semi-annual basis.

Changes to the PH-MCO provider networks resulted in shifts of enrollees among the PH-MCOs and required a refinement to the plan factor development. To address these underlying member shifts, a more recent point in time is used to assign recipients to a PH-MCO and calculate the corresponding plan factors. The plan factors are currently updated on a quarterly basis and utilize the enrollment from the first day of the application quarter to assign members to a PH-MCO.

Newborn Scoring Methodology

With the implementation of risk adjustment, the newborn rate was eliminated and newborn costs were incorporated into the TANF/HB capitation rates. Based on PH-MCO feedback, DHS subsequently decided to reinstate the newborn rate cell to address concerns regarding the disproportionate distribution of newborns among the PH-MCOs. Over time, the risk-adjustment application for newborns has been modified to enhance the process for this unique population.

The initial newborn risk scores were developed using a single, 12-month study period, where a newborn could have a risk score that was based on data with one to 12 months of disease experience. In an effort to utilize more data for the development of newborn risk scores, individual study periods were created for each newborn that provided for seven to 12 months of disease experience.

Another aspect of newborn risk scoring that changed over time was the method used to assign the newborn experience to the PH-MCOs. Historically, the PH-MCO assignment was based on the distribution of MMs within the study period or a hybrid approach using the birth PH-MCO and historical MM enrollment. With the introduction of the two separate newborn rates (TANF-MAGI < 2 Months and TANF-MAGI 2–11.999 Months), the PH-MCO assignment approach changed once again. The plan factor to support the TANF-MAGI < 2 Months rate was based solely on the birth PH-MCO assignment. The plan factor to support the TANF-MAGI 2–11.999 Months rate was based on the distribution of MMs by PH-MCO when the newborns were two through 11 months old.

Due to the uncertainty around the PH-MCO re-procurement at the time and potential upcoming changes in PH-MCOs that were operating within the HealthChoices program, the newborn risk-adjustment process utilized was cancelled beginning January 1, 2017. The newborn risk-adjustment process relied on historical newborn attraction patterns for the PH-MCOs. With the potential change in PH-MCOs, it was likely that these attraction patterns would not hold. Therefore, the newborn risk-adjustment process was cancelled effective with the 2017a risk assessment. The Department implemented a new method of risk mitigation for newborns, beginning January 1, 2018, in the form of a high-cost, risk-sharing arrangement for the Under Age 1 rate cell. At this time, this risk mitigation technique will be used in place of the newborn risk-adjustment process.

Cost Weights

The initial risk assessments relied on "national" experience for the relative costs associated with each CDPS category. The national experience, which was based on seven Medicaid programs from the early 1990s, was used because the encounter data that were available prior to the risk-adjustment implementation was insufficient to support the development of PA-specific cost weights.

Beginning in January 2009 (with the introduction of the CDPS+Rx model), PA-specific cost weights developed from CY 2005 and CY 2006 HealthChoices experience in the SE, SW and L/C zones

were used to assess the risk attributable to the PH-MCOs. Subsequent updates to PA-specific cost weights are as follows:

1. To reflect more recent medical practices and to include statewide experience, the PA-specific cost weights were updated using SFY 10–11 and SFY 11–12 experience. These updated PA-specific cost weights are referred to as Version 2.0 and began to be used starting with the 2014b risk assessment. Subsequent to this, Version 2.1 cost weights were developed, where TANF and HB 19 and 20-year old recipients were reclassified as children instead of adults to align with an update made to the rate cell structure, effective with the 2015a risk assessment.

2. To reflect more recent medical practices and to include the Newly Eligible population, the PA-specific cost weights were updated using CY 2016 and CY 2017 experience. These updated PA-specific cost weights are referred to as Version 3.0 and began to be used starting with the 2019a risk assessment.

Use of Only DHS-Accepted Records

Risk-assessment techniques rely heavily upon the diagnoses reported on the encounter data to identify the disease conditions associated with each recipient. Since the HealthChoices program uses the risk-assessment results to adjust the capitation rates paid to the PH-MCOs, there is a strong incentive for the PH-MCOs to submit encounter data that meet the risk-adjustment requirements. Initially this meant that the PH-MCOs submitted the encounter data prior to the established data cut-off. This policy resulted in significant improvements in encounter volume and diagnostic reporting, but less improvement on the other encounter data components.

Recognizing the strong data reporting incentives associated with risk adjustment, DHS decided to leverage the risk-adjustment process to improve the overall quality of the encounter data by only using those records that pass the required PROMISe edits (DHS-accepted records) within the risk-assessment process. This policy change has resulted in a significant increase in the proportion of encounter records that meet the data quality requirements established by DHS. This improved data quality was observed by all PH-MCOs and ultimately allows DHS to rely more heavily on the encounter data to support other HealthChoices initiatives beyond risk adjustment.

Managed Care Organization-Altered Record Policy

During the 2010 encounter onsite reviews, it was discovered that some PH-MCOs were creating new encounter records for services that were never submitted by the provider or modifying records submitted by providers to include "missing" diagnoses based on medical chart review findings from the PH-MCOs' representatives. As part of their process, the PH-MCOs never received approval from the providers regarding the medical chart review findings and, specifically, the encounter data creation/modification. At the time of the encounter onsite review, there was no specific policy from DHS that precluded this type of activity from the PH-MCOs. Subsequent to the onsite reviews, an official policy memo was released stating that DHS does not accept records that have been altered,

adjusted or submitted by an MCO without supporting documentation in the form of a claim or encounter (paper or electronic) from the submitting provider who originated the medical service.

New Physical Health-Managed Care Organization Considerations

Every few years, DHS reevaluates the contractors that provide services for the HealthChoices program against the Commonwealth's goals. This can result in some PH-MCOs exiting a zone and/or the addition of new PH-MCOs into a zone. Changes to the participating PH-MCOs often alter the choices made by recipients regarding their PH-MCO selection. These attraction patterns will generally take a while to stabilize as Medicaid recipients become more familiar with the new PH-MCOs. As a result of this phenomenon, PH-MCOs' plan factors should be measured frequently (e.g., monthly or quarterly) to account for the changes in risk attraction patterns that are occurring over time as membership in the new PH-MCOs increases.

Effective April 1, 2010, new PH-MCOs entered the SE and L/C zones. To help these new PH-MCOs establish their HealthChoices membership, DHS has historically assigned the vast majority of the auto-assignee recipients to a new PH-MCO for a period of time. Since recipients who do not choose a PH-MCO are generally lower risk than recipients who actively choose a PH-MCO, the mix of auto-assignee and chooser recipients can significantly impact the health risk of each PH-MCO. Recognizing this, the health risk assumption used for unscored recipients was refined to account for each PH-MCO's mix of auto-assignees and choosers. The unscored assumption was further refined to address low credibility situations where a PH-MCO's scored population was small and/or the scored recipients represented a small portion of the overall population. In these low credibility situations, the unscored assumption was either the region-wide risk score or a blend of the PH-MCO's risk score and the region-wide risk score. This low credibility application was later updated prior to the release of the 2011b risk-adjustment results. This update was implemented to place a lower credibility percentage on the new PH-MCOs' risk scores when assigning risk to their unscored populations, thereby making the process of attaining full credibility for their risk scores a more gradual process. Due to increased limitation over time in identifying the auto-assignee and chooser recipients, a new unscored assumption was developed and is described in more detail in the Unscored Assumption Changes section of Appendix A.

Additionally, to aid PH-MCOs new to HealthChoices, DHS provided technical assistance sessions and documentation regarding the capitation rate development and risk-adjustment processes prior to implementation. Following the implementation of new PH-MCOs into a HealthChoices zone, a special file was provided to the new PH-MCOs that contained the CDPS+Rx categories (group of disease conditions) associated with each of its enrolled recipients. This special file was provided during the PH-MCO's initial months of operation within a HealthChoices zone to help them better understand the disease characteristics of its enrollees.

HealthChoices Expansion

The Commonwealth expanded the HealthChoices program to all counties in PA. Prior to this expansion, 25 of the 67 counties in PA were in the HealthChoices program. With the expansion, the remaining 42 counties were phased in to the HealthChoices program over a period of time.

This expansion created two new zones: the NW zone, implemented on October 1, 2012, and the NE zone, implemented on March 1, 2013, for 35 of the 42 counties; the remaining seven counties were added to the legacy SW and L/C zones on July 1, 2012. More details of the zone and region structure, including the county assignments to the different zones and regions, can be found in Section 4 (Capitation Rates and Other Reimbursement Arrangements).

As part of this expansion, the Commonwealth risk-adjusted capitation payments made to the PH-MCOs in these expansion counties from day one of implementation. The methodology and processes used for the 25 legacy HealthChoices counties were carried over and used for the expansion counties. This included the same data collection, individual risk score development and PH-MCO risk score development methodologies and processes utilized in the legacy HealthChoices counties.

The newborn rate cells for the HealthChoices expansion were not risk-adjusted during the initial risk-assessment periods. During each risk-assessment period through January 1, 2017, the newborn rate cells for all PH-MCOs and zones were evaluated to ensure sufficient experience and data for risk scoring purposes.

Application of Limits to Risk Score Changes

Subsequent to the implementation of the risk-adjustment process, the Commonwealth changed its MMIS. The collection of encounter data was disrupted, which led to alternative methods for either collecting data and/or addressing missing data. During this period of transition, a limit was applied to the risk-adjustment process to avoid any overall plan factor changes (across all regions and rate cells) in excess of 2.5% between semi-annual risk adjustments.

At this time, there is no limit on the risk score changes that can occur between risk adjustments.

Unscored Assumption Changes

Effective April 1, 2010, the health risk assumption used for unscored recipients was based on each PH-MCO's mix of auto-assignees and choosers. Due to increased limitation over time in identifying the auto-assignee and chooser recipients, a new unscored assumption was developed. A comparison using several years of historical data was created to determine the impact of the switch to the age/gender unscored assumption methodology. It was determined that the age/gender unscored assumption methodology did not cause any significant movement of dollars between PH-MCOs when compared to the auto-assignees and choosers unscored assumption methodology.

Beginning January 1, 2016 for the non-Under Age 1 rate cells, assumed risk scores are assigned to the unscored recipients based on their age and gender profile as of the first day of the application quarter.

The age/gender unscored assumption continues to address low credibility situations where a PH-MCO's scored population is small and/or the scored recipients represent a small portion of the overall population. In these low credibility situations, the unscored assumption is either the region-wide risk score or a blend of the PH-MCO's risk score and the region-wide risk score specific to the age/gender grouping.

Adult Expansion (Newly Eligible) Temporary Risk-Adjustment Process

Effective January 1, 2015, the Commonwealth expanded their Medicaid managed care program to cover individuals ages 19 through 64 in households with incomes up to 138% of the federal poverty level. These newly eligible individuals, also referred to as the Adult Expansion population were initially enrolled in either a HealthChoices PH-MCO under a Newly Eligible rate cell or a Private Coverage Organization (PCO) as part of the *Healthy Pennsylvania* (*Healthy PA*) program. However, the *Healthy PA* program was discontinued effective September 2015, and all newly eligible enrollees were covered by a HealthChoices PH-MCO under Newly Eligible rate cells, at that time.

Similar to the Traditional HealthChoices rate cells (e.g., TANF and SSI), DHS recognized that risk variation likely existed amongst each PH-MCO's Adult Expansion population and sought risk adjustment as a means to better match payment to risk. However, in order for an early implementation of Adult Expansion risk adjustment to take place, a risk-adjustment methodology for this new population, separate from the Traditional HealthChoices risk adjustment, had to be developed.This process used the UCSD Medicaid Rx model and is described in full in the RAR Manual Version 2016. Beginning July 1, 2017, the Newly Eligible rate cells were transitioned to the same process and timelines as the Traditional rate cells, using the CDPS+Rx model.

Inherent Rate Risk Adjustment (Newly Eligible Rate Cells Only)

Through the end of CY 2018, the final step in the Newly Eligible plan factor calculation was the inherent rate risk (IRR) adjustment. This adjustment was necessary to avoid double counting any risk variation amongst the PH-MCOs that was already being addressed through the capitation rates that varied by the four to 10 age/gender rate cells since only one risk score was created for the whole Newly Eligible population. The IRR was measured by calculating a composite rate for each PH-MCO using the capitation rates and total recipient counts based on the enrollment snapshot used for the application quarter. The resulting composite rates for each PH-MCO were divided by the composite rate for all PH-MCOs combined, thus producing an inherent rate risk score that measures the risk differential already addressed through the age and gender rate structure. Beginning January 1, 2019, the Newly Eligible rate cells were collapsed into two rate cells and cost-weights specific to the Newly Eligible population were used. With these updates, the IRR

process was no longer used and risk scores specific to the two Newly Eligible rates cells were developed.

APPENDIX B
GLOSSARY

Accepted Record	Encounter record that passed all of the required PROMISe™ edits, as determined by DHS. Also referred to as a DHS-accepted record
Acuity Factor	Measurement of relative health care needs based on the CDPS+Rx model and a recipient's demographic, diagnostic information and pharmacy usage. Also referred to as an individual risk score.
Adverse Selection	Indicates that a PH-MCO has enrolled sicker-than-average recipients. This condition can be identified when budget neutral plan factors exceed 1.0000.
Applicable Exclusions	Excluded amounts not subject to risk adjustment are not included in the portion of the PH-MCO's' rate that receives risk adjustment.
Application Period	The time period the plan factors will be used to adjust the capitation rates. For example, the 2019b risk-adjustment results will be used to adjust the July 1, 2019 through December 31, 2018 capitation rates. In this example, the application period is July 1, 2019 through December 31, 2019.
Average Selection	Indicates that a PH-MCO has enrolled recipients with average health risk. This condition can be identified when budget neutral plan factors are equal to 1.0000.
Budget Neutrality Adjustment	The final step in the risk-adjustment process, where the PH-MCO plan factors are adjusted to ensure that no unintended reductions or overages in total capitation payments will occur.
Capitation Rates	Pre-determined payments to PH-MCOs for each member they enroll. The dollar amount, per member per month, is based on the regional and rate cell status of the member.
CDPS	The CDPS is a diagnostic classification system that estimates health risk using demographic and diagnostic characteristics. The design and values associated with this model were developed specifically by the UCSD for TANF and Disabled Medicaid recipients. This was the risk-assessment model that was used to risk adjust HealthChoices capitation rates from 2003 through 2008.

CDPS+Rx	The CDPS+Rx model is a combined diagnosis and pharmacy model that was developed specifically by UCSD for TANF and Disabled Medicaid recipients. This model uses both the CDPS and the restricted version of the Medicaid Rx models to classify people in disease conditions. A hierarchy is then applied to ensure that a person can only be classified once into a major category. This is the risk-assessment model that has been used to risk adjust HealthChoices capitation rates since 2009. Additional information regarding this model is provided in Section 2.
Child Interaction Factors	Component of the CDPS+Rx Disabled model that recognizes that additional costs are generally attributed to children with certain disease conditions. The child interaction factors are add-on weights that represent the difference in treating children compared to adults for certain conditions.
Concurrent Model	This model measures existing conditions and their ability to measure existing risk. This is the model used to assess health risk in the HealthChoices program.
Control Totals	Used in the process of data validation; comparison of record counts of files sent by one entity versus files received by another entity to ensure complete file transfer. This validation step occurs whenever Mercer receives data from the Commonwealth. This validation step is highly recommended when data are sent to the PH-MCOs. As a result, control totals are sent along with each file transfer.
Cost Weight	A numeric value that is an estimate of the health risk of a disease or demographic category. A cost weight is derived from comparing the relative cost associated with each CDPS+Rx category to the average cost of the population.
Demographic Factors	Demographic factors are incorporated into the CDPS+Rx model to estimate the medical resources not contained within the disease categories. Demographic factors are segregated by gender and age ranges.
Diagnostic Data	Data that contains a recipient's diagnoses, which may be provided in FFS claims or MCO encounter data. These data (claims and encounter) classify members into specific disease conditions, which then renders classification into CDPS+Rx categories.

Disease Impact Rank	Measurement of the impact that a particular disease category may have on the development of the plan factors. This measurement takes into account the magnitude of the CDPS+Rx category weight in conjunction with the portion of the population presenting with the chronic condition. The lower the disease impact rank, the greater the category's impact on the plan factor (one equals the greatest impact). Conversely, the higher the disease impact rank, the less impact on the plan factor. The disease impact rank is a quick resource for determining the disease categories that have the greatest influence when measuring the risk of the underlying population.
DHS	The DHS manages the HealthChoices program.
Dual Eligibles	Recipients who qualify for both Medicare and Medicaid benefits. Data associated with these recipients are typically underreported because a record is only submitted to the Commonwealth or the PH-MCOs when Medicaid is financially responsible for a portion of the service beyond the amount paid by Medicare. Since Medicare payment is often considered full reimbursement, Medicaid only receives a relatively small subset of the claims experience that contains the requisite data to support the risk-assessment process. As a result of this underreporting, dual eligibles are not assigned a risk score.
Eligibility File	Data that contains historical demographic information used to classify each recipient into a rate cell, region and CDPS+Rx demographic category. The eligibility data also contain Medicaid eligibility and PH-MCO enrollment segments used to determine whether the recipient has sufficient experience to receive a CDPS+Rx acuity factor. These data are used within the semi-annual risk-adjustment processes.
Enrollment File	Data that contains current demographic information used to assign a recipient to a rate cell, region and CDPS+Rx demographic category. These data are used within the quarterly risk-adjustment processes.
Frequency Analysis	Process to identify the unique values present within eligibility, claims and encounter data submitted for risk adjustment. This analysis indicates whether any expected values are missing, invalid or present in unexpected levels, and whether there is any significant change from prior experience.
ICD-9 Codes	International Classification of Diseases, 9th Revision (ICD-9) was the input used in the CDPS+Rx model to assess a member's health risk based on historical chronic conditions. These chronic conditions were identified using the provider-submitted ICD-9 diagnosis codes. Also referred to as diagnosis codes. Note that the transition from ICD-9 Codes to ICD-10 Codes took place on October 1, 2015.

ICD-10 Codes	ICD-10 is the input used in the CDPS+Rx model to assess a member's health risk based on historical chronic conditions. These chronic conditions are identified using the provider-submitted ICD-10 diagnosis codes. Also referred to as diagnosis codes. Note that the transition from ICD-9 Codes to ICD-10 Codes took place on October 1, 2015.
Low Credibility Situations	During the quarterly plan factor development, low credibility situations occur when a PH-MCO's scored population is not fully used to assign plan factors to that PH-MCO's unscored recipients. Specifically, when a PH-MCO's scored population has less than 1,200 scored MMs or less than 50% MM scored percentage, it is referred to as a low credibility situation.
Major Categories	The CDPS+Rx model classifies disease conditions into major categories. These categories are representative of body systems (e.g., cardiovascular or pulmonary) or illnesses that affect multiple systems (e.g., infectious disease or diabetes).
MCO Altered Record	Encounter records that have been altered, adjusted or submitted by an MCO, without supporting documentation in the form of a claim or encounter (paper or electronic) from the submitting provider who originated the medical service. Effective with the release of MCOPS Memo #06/2010-011, these records are disallowed.
Medicaid Rx	Medicaid Rx is a disease classification system that estimates health risk using demographic and pharmacy usage. The design and values associated with this model were developed specifically by the UCSD for TANF and Disabled Medicaid recipients. Two versions of the model exist. The full model contains 45 categories that are designed to measure a population's health risk independent of any diagnostic data. The restricted version of the model was specifically designed to be used in combination with diagnosis data as part of the CDPS+Rx model and includes 15 categories.
Medical Intensity Subcategories	The CDPS+Rx model further classifies the conditions within a major category into medical intensity subcategories based on their estimated medical intensity (e.g., high, medium or low).
MM	Unit of coverage defined as one member being covered for one month. A member covered for one year constitutes 12 MMs. This is also referred to as eligible months.
MM Scored Percentage	The number of months that a PH-MCO's scored population was eligible during the study period, divided by that PH-MCO's total recipients (scored and unscored) multiplied by 12. This metric is used quarterly as a component of the PH-MCO risk score credibility grid, when assigning the credibility percentage to the PH-MCO's risk score within the unscored population's risk assumption.

NDC	The NDC is an input used in the Medicaid Rx and CDPS+Rx models to assess a member's health risk based on their pharmacy usage. The NDC on the claims and encounters indicate the drug that was filled.
P4P	A program operated by the Commonwealth in which each PH-MCO is eligible to earn additional revenue based on improved and continued high performance in targeted areas. These areas are identified by the Commonwealth, and if the P4P program is fully funded, PH-MCOs can earn up to 5% of approved capitation payments.
Pharmacy Usage	Data that contains the prescriptions that a member had filled during the study period, which may be provided in FFS claims or MCO encounter data. These data (claims and encounter) classify members into specific disease conditions, which then renders classification into the Medicaid Rx and CDPS+Rx categories.
Plan Factor (Unadjusted)	Estimated PH-MCO health risk as measured prior to budget neutrality.
Population Statistics	At the bottom of each prevalence report are statistics on the recipients that were not classified into a disease category from the CDPS+Rx model. The first statistic measures the portion of the population that did not have any data to contribute to the risk scoring process. The second statistic measures the portion of the population that did have data, but did not have a CDPS+Rx weighted disease condition. These two population statistics are mutually exclusive.

For the purpose of creating these statistics, a person is considered as having data if they had any inpatient, outpatient or professional records within the study data period, or were classified into one of the restricted Medicaid Rx categories. |
Positive Selection	Indicates that a PH-MCO has enrolled healthier-than-average recipients. This condition can be identified when budget neutral plan factors are less than 1.0000.
Prevalence Reports	This report compares the PH-MCO population characteristics (as measured by CDPS+Rx) to the characteristics of the entire population. The prevalence reports also provide the interim steps used to develop the final plan factors. A separate prevalence report is provided for the following CDPS+Rx risk-adjusted rate cells: TANF-MAGI Ages 1–20, TANF-MAGI Ages 21+ Child, Disabled-BCC Ages 1+ and Newly Eligible (combined).
Prospective Model	This model measures existing conditions and their ability to predict future health care costs.

Rate Cell	Each rate cell considers the eligibility criteria necessary for the recipient to receive Medicaid coverage. This distinction generally considers the income, age and medical status of the recipients. To recognize the variation in health risk based on the recipient's eligibility status, separate capitation rates are developed by rate cell.
Read Me	Within the risk-adjustment process, there are a series of reports that are distributed to the PH-MCOs. Included along with the reports is a "read me" document that describes the content of the reporting package, along with the control totals for any data files.
Risk Adjustment	Adjustment of PH-MCO capitation revenue based on the health risk associated with enrolled members, as measured based on demographic characteristics and prevalence of chronic disease conditions. The intent of this approach is to provide higher reimbursement to those PH-MCOs experiencing adverse selection and lower reimbursement to those PH-MCOs experiencing positive selection.
Risk Assessment	Measurement of individual health risk based on the recipient's age, gender and chronic disease history.
Risk Pool	A separate pool of funds that is distributed among PH-MCOs using a mechanism other than CDPS+Rx.
Risk Sharing	An arrangement where the Commonwealth and the PH-MCOs share the expenses associated with certain high-risk recipients who incur a certain level of health care expenses.
Scored MMs	The number of months that a PH-MCO's scored population was eligible during the study period. This metric is used quarterly as a component of the PH-MCO risk score credibility grid, when assigning the credibility percentage to the PH-MCO's risk score within the unscored population's risk assumption.
Scored Recipients	Recipients with six or more months of Medicaid eligibility during the study period. Excludes recipients who have both Medicare and Medicaid coverage, commonly referred to as dual eligibles.
Shadow Pricing	An approach used to assign a standard unit cost amount to records with invalid or unreasonable unit costs created by sub-capitation arrangements or varied inpatient contracting.
Subcapitation	A financial arrangement between a PH-MCO and a provider, where the provider receives an agreed upon monthly fee regardless of the number of services that are rendered. Data for subcapitated providers generally do not contain any financial information and can be incomplete because providers do not have a financial incentive to submit records to the PH-MCO.

Supplemental Maternity Care Payment	To compensate PH-MCOs for each delivery they incur, the Commonwealth pays the PH-MCOs a supplemental maternity payment. To the extent that PH-MCOs have a different incidence rate of maternity events, the supplemental maternity payment better matches payment to risk by providing a greater payment to PH-MCOs experiencing more deliveries, without the application of CDPS+Rx risk adjustment.
Study Period	Represents the 12-month time period that data were collected for risk assessment. There is generally a seven-month gap between the study period and the first month the acuity factors are used to adjust capitation rates. For example, the 2019b risk-adjustment analysis used December 1, 2017 through November 30, 2018 data to apply to the July 1, 2019 through December 31, 2019 capitation rates. In this example, the study period is December 1, 2017 through November 30, 2018, under normal circumstances.
UCSD	UCSD staff developed the CDPS, CDPS+Rx and Medicaid Rx models. Their website can be found at the following address: http://cdps.ucsd.edu/. To access any of the model software, a license agreement must be completed.
Unscored Recipients	Recipients who do not meet the scoring criteria used to determine whether a recipient has sufficient experience to receive an acuity factor within the semi-annual risk assessment. An assumption is made about the health risk of unscored recipients in order to assess the overall health risk for each PH-MCO within the quarterly plan factor development.

APPENDIX C
PENNSYLVANIA-SPECIFIC COST WEIGHTS

The cost weights for the CDPS+Rx model listed in Table C for the TANF Adult, TANF Child and SSI populations below are the Version 3.0 cost weights. These became effective January 1, 2019 and were developed using the methodology described in Section 3. This set of weights represent the relative costs associated with the HealthChoices managed care benefit package and exclude the costs associated with the High-Cost Risk Pool, Home Nursing Risk Sharing, and the Specialty Drug Risk Mitigation devices.

The cost weights may need to be updated if significant changes are made to the CDPS+Rx (beyond the standard NDC and diagnostic code updates), or if substantial changes are made to the HealthChoices program, which could include the addition/exclusion of significant benefits or modifications to the covered populations or rate cell structure:

TABLE C – PA-SPECIFIC CDPS+RX COST WEIGHTS

CDPS+RX CATEGORY	DESCRIPTION	TANF ADULT	TANF CHILD	SSI	NEWLY ELIGIBLE
Demographic	Age under 1	N/A	N/A	N/A	N/A
	Ages 1 to 4	N/A	0.384	0.013	N/A
	Male ages 5 to 14	N/A	0.361	0.011	N/A
	Female ages 5 to 14	N/A	0.378	0.012	N/A
	Male ages 15 to 24	0.025	0.402	0.009	0.033
	Female ages 15 to 24	0.234	0.541	0.014	0.111
	Male ages 25 to 44	0.089	N/A	0.008	0.052
	Female ages 25 to 44	0.222	N/A	0.014	0.115
	Male ages 45 to 64	0.178	N/A	0.008	0.076
	Female ages 45 to 64	0.189	N/A	0.013	0.116
	Ages 65 and over	0.184	N/A	0.005	N/A
Cardiovascular	Cardiovascular, very high	7.264	32.482	2.566	6.918
	Cardiovascular, medium	1.777	3.609	0.818	1.902

CDPS+RX CATEGORY	DESCRIPTION	TANF ADULT	TANF CHILD	SSI	NEWLY ELIGIBLE
	Cardiovascular, low	0.635	1.439	0.307	0.642
	Cardiovascular, extra low	0.179	0.728	0.087	0.105
Psychiatric	Psychiatric, high	0.437	0.855	0.290	0.476
	Psychiatric, medium	0.389	0.643	0.143	0.350
	Psychiatric, medium low	0.289	0.485	0.136	0.287
	Psychiatric, low	0.177	0.317	0.128	0.174
Skeletal and Connective	Skeletal, medium	0.961	1.688	0.583	1.349
	Skeletal, low	0.624	0.849	0.245	0.662
	Skeletal, very low	0.624	0.849	0.245	0.662
Central Nervous System (CNS)	CNS, high	6.018	17.644	1.215	5.198
	CNS, medium	2.370	4.408	0.758	2.578
	CNS, low	0.646	1.565	0.324	0.615
Pulmonary	Pulmonary, very high	N/A	N/A	2.311	N/A
	Pulmonary, high	4.040	20.850	1.240	5.031
	Pulmonary, medium	2.549	6.157	1.240	2.727
	Pulmonary, low	0.303	0.667	0.167	0.363
Gastrointestinal	Gastrointestinal, high	2.533	13.680	1.354	2.667
	Gastrointestinal, medium	1.412	5.321	0.557	1.307
	Gastrointestinal, low	0.452	0.856	0.197	0.430
Diabetes	Diabetes, type 1 high	2.505	N/A	0.962	2.230
	Diabetes, type 1 medium	2.505	N/A	0.962	2.230
	Diabetes, type 2 medium	0.577	3.165	0.360	0.613
	Diabetes, type 2 low	0.577	3.165	0.360	0.613
Skin	Skin, high	4.681	12.982	1.360	3.816
	Skin, low	1.756	2.509	0.609	1.546
	Skin, very low	0.303	0.555	0.146	0.274
Renal	Renal, extra high	5.599	11.753	2.836	5.122
	Renal, very high	1.056	3.902	0.427	1.038
	Renal, medium	1.056	3.902	0.427	1.038

CDPS+RX CATEGORY	DESCRIPTION	TANF ADULT	TANF CHILD	SSI	NEWLY ELIGIBLE
	Renal, low	0.676	0.612	0.247	0.645
Substance Abuse	Substance abuse, low	0.365	0.503	0.171	0.280
	Substance abuse, very low	0.122	0.212	0.047	0.088
Cancer	Cancer, very high	10.215	27.997	3.991	9.267
	Cancer, high	5.193	10.341	1.426	4.497
	Cancer, medium	1.740	8.921	0.756	1.687
	Cancer, low	0.688	2.019	0.106	0.505
Developmental Disabilities (DD)	DD, medium	N/A	7.708	0.040	N/A
	DD, low	N/A	1.847	N/A	N/A
Genital	Genital, extra low	0.334	0.827	0.127	0.305
Metabolic	Metabolic, high	1.409	4.738	0.827	1.477
	Metabolic, medium	1.409	4.738	0.827	1.477
	Metabolic, very low	0.804	0.509	0.227	0.696
Eye	Eye, low	0.572	N/A	0.185	0.632
	Eye, very low	0.488	0.798	0.105	0.373
Cerebrovascular	Cerebrovascular, low	2.509	3.513	0.627	2.345
Infectious Diseases	AIDS, high	7.396	13.956	3.603	7.449
	Infectious, high	2.527	8.315	1.810	2.922
	HIV, medium	2.527	4.937	1.336	2.922
	Infectious, medium	2.505	4.937	1.336	2.800
	Infectious, low	0.247	0.857	0.082	0.202
Hematological	Hematological, extra high	2.983	37.555	9.451	13.866
	Hematological, very high	0.871	2.872	1.385	1.718
	Hematological, medium	0.871	1.270	1.018	1.718
	Hematological, low	0.871	1.270	0.749	1.309
Restricted	Anti-coagulants	1.777	3.609	0.818	1.902
	Cardiac	0.179	0.728	0.087	0.105
Medicaid Rx Categories	Depression/Psychosis/Bipolar	0.177	0.317	0.128	0.174
	Diabetes	0.577	3.165	0.360	0.613

CDPS+RX CATEGORY	DESCRIPTION	TANF ADULT	TANF CHILD	SSI	NEWLY ELIGIBLE
	ESRD/Renal	1.056	3.902	0.427	1.038
	Hemophilia/von Willebrands	2.983	37.555	9.451	13.866
	Hepatitis	2.527	4.937	1.336	2.922
	HIV	2.527	4.937	1.336	2.922
	Infections, high	2.527	8.315	1.810	2.922
	Inflammatory/Autoimmune	0.624	0.849	0.245	0.662
	Malignancies	1.74	8.921	0.756	1.687
	Multiple Sclerosis/Paralysis	2.370	4.408	0.758	2.578
	Parkinson's/Tremor	0.646	1.565	0.324	0.615
	Seizure Disorders	0.646	1.565	0.324	0.615
	Tuberculosis	0.303	0.667	0.167	0.363
	Cardiovascular, very high	N/A	N/A	2.312	N/A
	Cardiovascular, medium	N/A	N/A	0.509	N/A
Child Interaction Factors	Central Nervous System, high	N/A	N/A	1.009	N/A
	Pulmonary, very high	N/A	N/A	1.820	N/A
	Pulmonary, high	N/A	N/A	0.940	N/A
	Gastrointestinal, high	N/A	N/A	0.926	N/A
	Metabolic, high	N/A	N/A	0.429	N/A
	HIV, medium	N/A	N/A	0.300	N/A
	Infectious, medium	N/A	N/A	1.318	N/A
	Hematological, extra high	N/A	N/A	-2.370	N/A

APPENDIX D
SAMPLE REPORTS

Appendix D.1 - Sample Encounter Volume Chart 2019b Risk Assessment Southeast - Professional
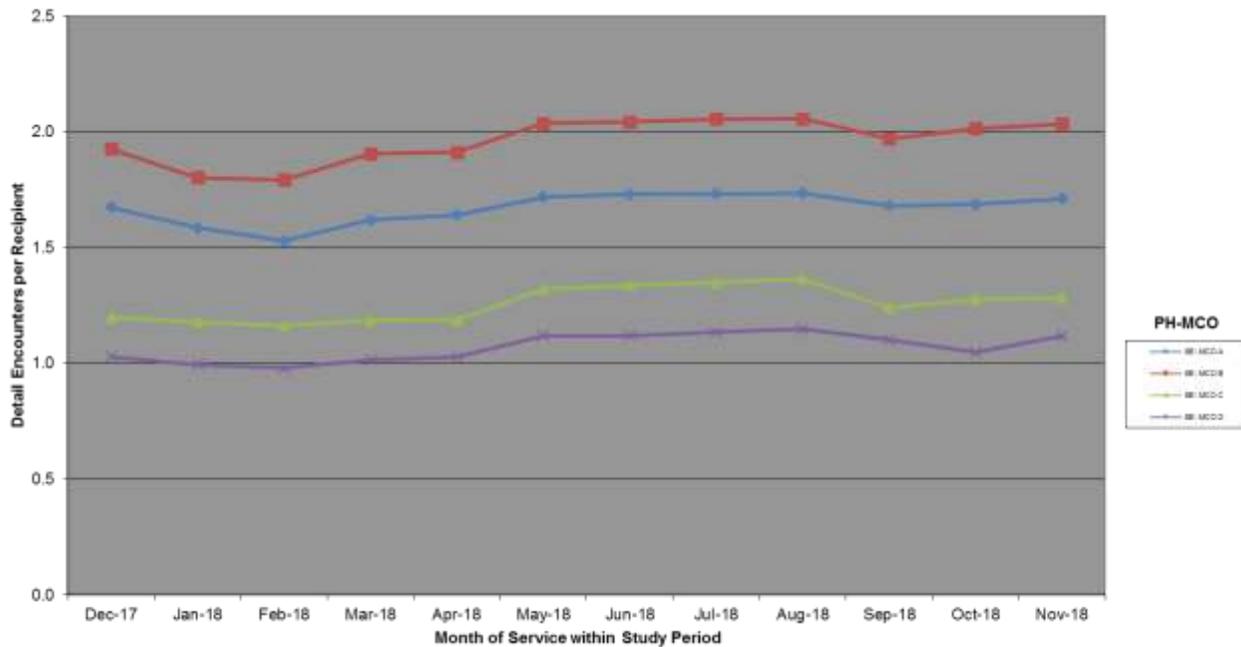
- Based on records that were submitted to PROMISe™ by the risk adjustment cutoff date.
- Duplicate professional records were removed.

Appendix D.2 - Sample Prevalence Report

2019b Risk Adjustment **Risk Category Distribution** *Study Period:* *December 1, 2017 through November 30, 2018*	**ABC Health Plan, Inc.** **Southeast Zone** Rate Cell: TANF-MAGI Ages 21+

	Only MCO Data (ABC Health Plan, Inc.)				All Data Sources†			
	Count of Total Recipients[1]	Percent of Total Recipients[1]	Count of Scored Recipients[2]	Percent of Scored Recipients[2]	Count of MCO Scored Recipients[3]	Percent of MCO Scored Recipients[3]	Count of Zone-Wide Scored Recipients	Percent of Zone-Wide Scored Recipients
CDPS+Rx Category	(A1)	(A2)	(B1)	(B2)	(C1)	(C2)	(D1)	(D2)
Demographic Categories								
Age Under 1	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Age 1 to 4	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Male Age 5 to 14	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Female Age 5 to 14	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Male Age 15 to 24	700	2.3%	445	1.6%	445	1.6%	1,530	2.1%
Female Age 15 to 24	5,300	17.8%	5,150	18.4%	5,150	18.4%	13,365	18.0%
Male Age 25 to 44	2,545	8.5%	2,100	7.5%	2,100	7.5%	6,045	8.2%
Female Age 25 to 44	18,000	60.4%	17,775	63.6%	17,775	63.6%	45,675	61.6%
Male Age 45 to 64	840	2.8%	650	2.3%	650	2.3%	1,952	2.6%
Female Age 45 to 64	2,400	8.1%	1,800	6.4%	1,800	6.4%	5,520	7.4%
Age 65 and Over	9	0.0%	7	0.0%	7	0.0%	21	0.0%
Age Subtotal	**29,794**	**100.0%**	**27,927**	**100.0%**	**27,927**	**100.0%**	**74,108**	**100.0%**
Diagnostic Categories								
Cardiovascular, very high	15	0.1%	10	0.0%	11	0.0%	33	0.0%
Cardiovascular, medium	290	1.0%	285	1.0%	284	1.0%	735	1.0%
Cardiovascular, low	1,400	4.7%	1,279	4.6%	1,280	4.6%	3,449	4.7%
Cardiovascular, extra low	2,700	9.1%	2,577	9.2%	2,576	9.2%	6,762	9.1%
Psychiatric, high	75	0.3%	70	0.3%	71	0.3%	186	0.3%
Psychiatric, medium	370	1.2%	369	1.3%	368	1.3%	943	1.3%
Psychiatric, medium low	1,100	3.7%	975	3.5%	976	3.5%	2,680	3.6%
Psychiatric, low	2,000	6.7%	1,999	7.2%	1,998	7.2%	5,099	6.9%
Skeletal, medium	600	2.0%	570	2.0%	571	2.0%	1,500	2.0%
Skeletal, low	1,400	4.7%	1,300	4.7%	1,299	4.7%	3,470	4.7%
Skeletal, very low	1,215	4.1%	1,200	4.3%	1,201	4.3%	3,083	4.2%
Central nervous system, high	20	0.1%	15	0.1%	16	0.1%	46	0.1%
Central nervous system, medium	180	0.6%	160	0.6%	159	0.6%	439	0.6%
Central nervous system, low	1,000	3.4%	998	3.6%	999	3.6%	2,548	3.4%
Pulmonary, very high	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Pulmonary, high	100	0.3%	94	0.3%	95	0.3%	249	0.3%
Pulmonary, medium	192	0.6%	190	0.7%	189	0.7%	488	0.7%
Pulmonary, low	4,200	14.1%	3,800	13.6%	3,801	13.6%	10,310	13.9%
Gastrointestinal, high	20	0.1%	19	0.1%	18	0.1%	50	0.1%
Gastrointestinal, medium	450	1.5%	375	1.3%	376	1.3%	1,073	1.4%
Gastrointestinal, low	2,400	8.1%	2,394	8.6%	2,393	8.6%	6,114	8.3%
Diabetes, type 1 high	25	0.1%	10	0.0%	11	0.0%	49	0.1%
Diabetes, type 1 medium	200	0.7%	180	0.6%	179	0.6%	490	0.7%
Diabetes, type 2 medium	200	0.7%	190	0.7%	191	0.7%	500	0.7%
Diabetes, type 2 low	1,100	3.7%	1,009	3.6%	1,008	3.6%	2,714	3.7%
Skin, high	15	0.1%	10	0.0%	11	0.0%	33	0.0%
Skin, low	60	0.2%	52	0.2%	51	0.2%	145	0.2%
Skin, very low	1,700	5.7%	1,550	5.6%	1,551	5.6%	4,185	5.6%
Renal, extra high	12	0.0%	10	0.0%	9	0.0%	29	0.0%
Renal, very high	145	0.5%	140	0.5%	141	0.5%	365	0.5%
Renal, medium	15	0.1%	9	0.0%	8	0.0%	32	0.0%
Renal, low	410	1.4%	370	1.3%	371	1.3%	1,006	1.4%
Substance abuse, low	500	1.7%	450	1.6%	449	1.6%	1,225	1.7%
Substance abuse, very low	375	1.3%	320	1.1%	321	1.1%	901	1.2%
Cancer, very high	45	0.2%	28	0.1%	27	0.1%	98	0.1%
Cancer, high	110	0.4%	100	0.4%	101	0.4%	271	0.4%
Cancer, medium	40	0.1%	35	0.1%	34	0.1%	97	0.1%
Cancer, low	110	0.4%	90	0.3%	91	0.3%	261	0.4%
Developmental disabilities, medium	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Developmental disabilities, low	50	0.2%	40	0.1%	41	0.1%	118	0.2%
Genital, extra low	1,400	4.7%	1,390	5.0%	1,389	5.0%	3,560	4.8%
Metabolic, high	140	0.5%	135	0.5%	136	0.5%	352	0.5%
Metabolic, medium	125	0.4%	110	0.4%	109	0.4%	304	0.4%
Metabolic, very low	480	1.6%	450	1.6%	451	1.6%	1,194	1.6%

Appendix D.2 - Sample Prevalence Report

2019b Risk Adjustment Risk Category Distribution	ABC Health Plan, Inc.
Study Period: December 1, 2017 through November 30, 2018	Southeast Zone
	Rate Cell: TANF-MAGI Ages 21+

	Only MCO Data (ABC Health Plan, Inc.)				All Data Sources†			
CDPS+Rx Category	Count of Total Recipients[1] (A1)	Percent of Total Recipients[1] (A2)	Count of Scored Recipients[2] (B1)	Percent of Scored Recipients[2] (B2)	Count of MCO Scored Recipients[3] (C1)	Percent of MCO Scored Recipients[3] (C2)	Count of Zone-Wide Scored Recipients (D1)	Percent of Zone-Wide Scored Recipients (D2)
Eye, low	60	0.2%	50	0.2%	49	0.2%	143	0.2%
Eye, very low	270	0.9%	250	0.9%	251	0.9%	669	0.9%
Cerebrovascular, low	100	0.3%	90	0.3%	89	0.3%	245	0.3%
AIDS, high	145	0.5%	140	0.5%	141	0.5%	365	0.5%
Infectious, high	10	0.0%	7	0.0%	6	0.0%	23	0.0%
HIV, medium	25	0.1%	20	0.1%	21	0.1%	59	0.1%
Infectious, medium	150	0.5%	130	0.5%	129	0.5%	363	0.5%
Infectious, low	440	1.5%	420	1.5%	419	1.5%	1,102	1.5%
Hematological, extra high	1	0.0%	1	0.0%	2	0.0%	3	0.0%
Hematological, very high	3	0.0%	2	0.0%	1	0.0%	7	0.0%
Hematological, medium	510	1.7%	475	1.7%	476	1.7%	1,266	1.7%
Hematological, low	275	0.9%	250	0.9%	249	0.9%	676	0.9%
Pharmacy Categories								
Anti-coagulants	470	1.6%	445	1.6%	446	1.6%	1,174	1.6%
Cardiac	1,300	4.4%	1,105	4.0%	1,104	4.0%	3,120	4.2%
Depression / Psychosis / Bipolar	3,200	10.7%	3,175	11.4%	3,176	11.4%	8,135	11.0%
Diabetes	235	0.8%	221	0.8%	220	0.8%	585	0.8%
ESRD / Renal	1	0.0%	1	0.0%	2	0.0%	3	0.0%
Hemophilia / von Willebrands	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Hepatitis	25	0.1%	20	0.1%	21	0.1%	59	0.1%
HIV	35	0.1%	30	0.1%	29	0.1%	84	0.1%
Infections, high	110	0.4%	100	0.4%	101	0.4%	271	0.4%
Inflammatory / Autoimmune	35	0.1%	22	0.1%	21	0.1%	76	0.1%
Malignancies	140	0.5%	110	0.4%	111	0.4%	327	0.4%
Multiple Sclerosis / Paralysis	10	0.0%	8	0.0%	7	0.0%	24	0.0%
Parkinson's / Tremor	80	0.3%	75	0.3%	74	0.3%	199	0.3%
Seizure disorders	740	2.5%	695	2.5%	696	2.5%	1,842	2.5%
Tuberculosis	10	0.0%	9	0.0%	8	0.0%	25	0.0%
Child Interaction Factors								
Cardiovascular, very high	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cardiovascular, medium	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Central nervous system, high	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pulmonary, very high	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pulmonary, high	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Gastrointestinal, high	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Metabolic, high	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HIV, medium	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Infectious, medium	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hematological, extra high	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Population Statistics								
No Claims (FFS / Encounter) Data	6,010	20.2%	3,800	13.6%	2,985	10.7%	13,116	17.7%
No Classified Disease Categories	9,900	33.2%	8,600	30.8%	8,115	29.1%	23,945	32.3%

†This includes encounters from all Physical Health MCOs and Behavioral Health MCOs along with fee-for-service (FFS) claims.
[1]Total recipients include all individuals within the 12 month study period, regardless of Medicaid eligibility duration.
[2]Scored recipients include eligible individuals that had six or more months of Medicaid eligibility within the 12 month study period.
[3]MCO-scored recipients include all scored recipients who had at least one month of Medicaid eligibility in ABC Health Plan, Inc.

Notes:
- *For more detail regarding the acuity factor calculations, see the 2019b Risk-Adjustment Methodology letter.*
- *Recipients are assigned to a HealthChoices zone, CDPS+Rx demographic category, and CDPS+Rx model based on their classification at the end of the study period (December 1, 2017 through November 30, 2018).*
- *The TANF Adult Model is used to classify individuals into CDPS+Rx disease categories for the TANF-MAGI Ages 21+ rate cell.*
- *Physical Health MCO encounters will only be used in the disease classification if the records passed the edits established by DHS.*

Appendix D.3 - Sample Estimated Financial Impact Report

2019b Risk Adjustment Financial Impact Report	Southeast Zone: ABC Health Plan, Inc.		
Plan Factor Comparison: 2019a to 2019b			

Southeast Zone: ABC Health Plan, Inc.

Rate Region 1

Estimated Financial Impact

Rate Cell	2019a Applied Plan Factor[1] (A)	2019b Estimated Plan Factor[2] (B)	Estimated Plan Factor Change[3] (C)
TANF-MAGI Ages 1-20	0.8821	0.8846	0.3%
TANF-MAGI Ages 21+	0.8079	0.8099	0.2%
Disabled-BCC Ages 1+	0.8212	0.8242	0.4%
Newly Eligible Ages 19 to 44	0.8934	0.8921	-0.1%
Newly Eligible Ages 45 to 64	0.7534	0.7523	-0.1%
Composite †	**0.8326**	**0.8336**	**0.1%**

Rate Region 2

Estimated Financial Impact

Rate Cell	2019a Applied Plan Factor[1] (A)	2019b Estimated Plan Factor[2] (B)	Estimated Plan Factor Change[3] (C)
TANF-MAGI Ages 1-20	0.8817	0.8805	-0.1%
TANF-MAGI Ages 21+	0.9491	0.9464	-0.3%
Disabled-BCC Ages 1+	0.8643	0.8761	1.4%
Newly Eligible Ages 19 to 44	0.9234	0.9220	-0.2%
Newly Eligible Ages 45 to 64	0.8034	0.8022	-0.1%
Composite †	**0.8749**	**0.8773**	**0.3%**

Zone-Wide

Estimated Financial Impact

Rate Cell	2019a Applied Plan Factor[1] (A)	2019b Estimated Plan Factor[2] (B)	Estimated Plan Factor Change[3] (C)
Composite †	**0.8453**	**0.8468**	**0.2%**

[1] The 2019a Applied Plan Factors were calculated using April 1, 2019 enrollment and the 2019a acuity factors.

[2] The 2019b Estimated Plan Factors were calculated using April 1, 2019 enrollment and the 2019b acuity factors.

[3] Estimated Plan Factor Change is the anticipated financial impact due to the scheduled acuity factor update. This measures the risk changes in the previously measured population, influence of newly scored recipients, data reporting changes and risk-scoring policy changes.

NOTES:

† The composite factors were developed using April 1, 2019 enrollment in combination with capitation rates by region, excluding any applicable withholds and the MCO Assessment, for the applicable rate cells.

Appendix D.4 - Sample Unadjusted Plan Factor Development

2019b Risk Adjustment Unadjusted Plan Factor Development	Southeast Zone: ABC Health Plan, Inc.							
Application Period: 2019 Q3	Rate Region 1							

	Scored Recipients[1]	Unscored Recipients[2]	Scored Member Months[3]	Maximum Member Months[4]	Member Month Scored Percentage[5]	PH-MCO Credibility Percentage[6]	PH-MCO Scored Average Risk Score	Region-wide Average Risk Score	Unscored Assumed Risk Score
Age/Gender Group	**TANF-MAGI Ages 1-20**								
Male and Female 1-4	5,038	662	55,665	68,393	81%	100%	1.0711	1.2231	1.0711
Male and Female 5-13	9,388	1,261	109,071	127,791	85%	100%	0.7735	0.8662	0.7735
Male 14-20	2,618	371	30,462	35,871	84%	100%	0.9085	1.0106	0.9085
Female 14-20	2,798	415	32,462	38,555	84%	100%	0.9983	1.1360	0.9983
Total	**19,842**	**2,709**	**227,660**	**270,610**	**84%**	**N/A**	**0.8986**	**1.0100**	**0.8991**
Age/Gender Group	**TANF-MAGI Ages 21+**								
Male 21-30	229	52	2,575	3,373	76%	100%	0.5776	0.6511	0.5776
Female 21-30	1,985	412	22,560	28,762	78%	100%	0.7770	0.9619	0.7770
Male 31-44	326	99	3,662	5,102	71%	100%	0.9050	1.0237	0.9050
Female 31-44	1,527	334	17,504	22,342	78%	100%	1.1402	1.3518	1.1402
Male and Female 45 +	544	104	6,197	7,774	79%	100%	1.3786	1.7462	1.3786
Total	**4,611**	**1,001**	**52,499**	**67,353**	**77%**	**N/A**	**0.9675**	**1.1915**	**0.9629**
Age/Gender Group	**Disabled-BCC Ages 1+**								
Male and Female 1-4	208	53	2,249	3,131	71%	100%	1.9359	1.9123	1.9359
Male and Female 5-13	1,111	69	13,173	14,157	93%	100%	0.7197	0.7394	0.7197
Male and Female 14-20	990	56	11,735	12,562	93%	100%	0.6549	0.6399	0.6549
Male and Female 21-30	1,036	65	12,262	13,214	92%	100%	0.7661	0.8329	0.7661
Male and Female 31-44	959	54	11,356	12,163	93%	100%	0.9164	1.2060	0.9164
Male and Female 45 +	3,364	252	39,925	43,391	92%	100%	1.2731	1.6471	1.2731
Total	**7,668**	**550**	**90,700**	**98,618**	**91%**	**N/A**	**1.0179**	**1.2325**	**1.1095**
Age/Gender Group	**Newly Eligible Ages 19 to 44**								
Male 19-30	3,971	1,899	43,548	70,436	61%	100%	0.7301	0.7527	0.7301
Female 19-30	3,789	1,269	42,612	60,704	70%	100%	0.8122	0.8850	0.8122
Male 31-44	2,662	1,329	28,863	47,888	60%	100%	1.1440	1.3441	1.1440
Female 31-44	2,159	706	24,258	34,384	70%	100%	1.1760	1.3529	1.1760
Total	**12,581**	**5,204**	**139,281**	**213,413**	**65%**	**N/A**	**0.9189**	**1.0462**	**0.9164**
Age/Gender Group	**Newly Eligible Ages 45 to 64**								
Male and Female 45 +	4,883	1,985	54,242	82,418	65%	100%	1.5704	2.1187	1.5704
Total	**4,883**	**1,985**	**54,242**	**82,418**	**65%**	**N/A**	**1.5704**	**2.1187**	**1.5704**

Final UPF Calculation	TANF-MAGI Ages 1-20	TANF-MAGI Ages 21+	Disabled-BCC Ages 1+	Newly Eligible Ages 19 to 44	Newly Eligible Ages 45 to 64
Scored Recipients	19,842	4,611	7,668	12,581	4,883
Unscored Recipients	2,709	1,001	550	5,204	1,985
Total Recipients	**22,551**	**5,613**	**8,218**	**17,784**	**6,868**
PH-MCO Scored Average Risk Score	0.8986	0.9675	1.0179	0.9189	1.5704
Unscored Assumed Risk Score	0.8991	0.9629	1.1095	0.9164	1.5704
Final Unadjusted Plan Factor	**0.8986**	**0.9666**	**1.0240**	**0.9182**	**1.5704**

Notes:

1. Scored Recipients are the count of individuals that are eligible as of July 1, 2019 that were assigned an acuity factor in the 2019b risk assessment.

2. Unscored Recipients are the count of individuals that are eligible as of July 1, 2019 that were not assigned an acuity factor in the 2019b risk assessment.

3. Scored Member Months represent the total number of member months that the scored recipients in ABC Health Plan, Inc. accounted for during the 2019b study period.

4. Maximum Member Months are calculated by multiplying the total recipient count by 12.

5. Member Month Scored Percentages are calculated by dividing the Scored Member Months by the Maximum Member Months and are rounded down to the nearest whole percentage.

6. PH-MCO Credibility Percentage can be determined using the Credibility Table provided within the 2019b (July through December 2019) Risk-Adjustment Methodology letter.

Appendix D.4 - Sample Unadjusted Plan Factor Development

2019b Risk Adjustment Unadjusted Plan Factor Development	Southeast Zone: ABC Health Plan, Inc.
Application Period: *2019 Q3*	Rate Region 2

	Scored Recipients[1]	Unscored Recipients[2]	Scored Member Months[3]	Maximum Member Months[4]	Member Month Scored Percentage[5]	PH-MCO Credibility Percentage[6]	PH-MCO Scored Average Risk Score	Region-wide Average Risk Score	Unscored Assumed Risk Score
Age/Gender Group					**TANF-MAGI Ages 1-20**				
Male and Female 1-4	2,707	404	29,734	37,334	79%	100%	0.9513	1.0798	0.9513
Male and Female 5-13	4,162	832	48,300	59,930	80%	100%	0.7222	0.8587	0.7222
Male 14-20	862	249	9,893	13,335	74%	100%	0.9445	1.0785	0.9445
Female 14-20	850	276	9,752	13,517	72%	100%	1.2136	1.2590	1.2136
Total	**8,582**	**1,761**	**97,678**	**124,116**	**78%**	**N/A**	**0.8655**	**0.9895**	**0.8832**
Age/Gender Group					**TANF-MAGI Ages 21+**				
Male 21-30	70	30	776	1,197	64%	28%	0.7062	0.7306	0.7238
Female 21-30	787	213	8,977	11,993	74%	100%	0.9508	1.0481	0.9508
Male 31-44	152	57	1,637	2,515	65%	100%	1.0017	0.9715	1.0017
Female 31-44	722	182	8,286	10,857	76%	100%	1.3611	1.4023	1.3611
Male and Female 45 +	266	70	3,035	4,026	75%	100%	1.6707	1.6857	1.6707
Total	**1,997**	**552**	**22,710**	**30,588**	**74%**	**N/A**	**1.1905**	**1.2674**	**1.1699**
Age/Gender Group					**Disabled-BCC Ages 1+**				
Male and Female 1-4	182	84	2,022	3,192	63%	100%	1.3063	1.2061	1.3063
Male and Female 5-13	906	128	10,559	12,404	85%	100%	0.6004	0.7437	0.6004
Male and Female 14-20	689	86	8,061	9,297	86%	100%	0.4853	0.6717	0.4853
Male and Female 21-30	399	34	4,683	5,199	90%	100%	0.6445	0.8759	0.6445
Male and Female 31-44	262	15	3,099	3,325	93%	100%	1.0464	1.1897	1.0464
Male and Female 45 +	774	79	9,137	10,228	89%	100%	1.2859	1.4784	1.2859
Total	**3,212**	**425**	**37,561**	**43,645**	**86%**	**N/A**	**0.8228**	**0.9616**	**0.8622**
Age/Gender Group					**Newly Eligible Ages 19 to 44**				
Male 19-30	1,262	736	14,140	23,987	58%	100%	0.7317	0.7861	0.7317
Female 19-30	1,511	584	17,063	25,147	67%	100%	0.8913	0.9832	0.8913
Male 31-44	839	491	9,249	15,959	57%	100%	1.2494	1.3998	1.2494
Female 31-44	1,043	351	11,688	16,720	69%	100%	1.3394	1.3462	1.3394
Total	**4,656**	**2,162**	**52,140**	**81,813**	**63%**	**N/A**	**1.0129**	**1.0884**	**0.9909**
Age/Gender Group					**Newly Eligible Ages 45 to 64**				
Male and Female 45 +	2,041	896	22,686	35,242	64%	100%	1.6173	2.0117	1.6173
Total	**2,041**	**896**	**22,686**	**35,242**	**64%**	**N/A**	**1.6173**	**2.0117**	**1.6173**

Final UPF Calculation	TANF-MAGI Ages 1-20	TANF-MAGI Ages 21+	Disabled-BCC Ages 1+	Newly Eligible Ages 19 to 44	Newly Eligible Ages 45 to 64
Scored Recipients	8,582	1,997	3,212	4,656	2,041
Unscored Recipients	1,761	552	425	2,162	896
Total Recipients	**10,343**	**2,549**	**3,637**	**6,818**	**2,937**
PH-MCO Scored Average Risk Score	0.8655	1.1905	0.8228	1.0129	1.6173
Unscored Assumed Risk Score	0.8832	1.1699	0.8622	0.9909	1.6173
Final Unadjusted Plan Factor	**0.8685**	**1.1860**	**0.8274**	**1.0059**	**1.6173**

Notes:

1. Scored Recipients are the count of individuals that are eligible as of July 1, 2019 that were assigned an acuity factor in the 2019b risk assessment.

2. Unscored Recipients are the count of individuals that are eligible as of July 1, 2019 that were not assigned an acuity factor in the 2019b risk assessment.

3. Scored Member Months represent the total number of member months that the scored recipients in ABC Health Plan, Inc. accounted for during the 2019b study period.

4. Maximum Member Months are calculated by multiplying the total recipient count by 12.

5. Member Month Scored Percentages are calculated by dividing the Scored Member Months by the Maximum Member Months and are rounded down to the nearest whole percentage.

6. PH-MCO Credibility Percentage can be determined using the Credibility Table provided within the 2019b (July through December 2019) Risk-Adjustment Methodology letter.

Appendix D.5 - Sample Risk-Adjustment Results Summary

2019b Risk Adjustment Quarterly Report	Southeast Zone: ABC Health Plan, Inc.
Application Period: 2019 Q3	Rate Region 1

Rate Region 1

	Eligibility						Plan Factors			
	Total Population Membership			MCO Assigned Membership			All MCOs Plan Factors/Rates		MCO-Specific Plan Factors/Rates	
Rate Cell	Scored Recipients[1] (A)	Total Recipients[2] (B)	Percent of Population Scored[3] (C)	Scored Recipients[1] (D)	Total Recipients[2] (E)	Percent of Population Scored[3] (F)	Final Unadjusted Plan Factor (G)	Final Plan Factor[4] (H)	Final Unadjusted Plan Factor (I)	Final Plan Factor[4] (J)
TANF-MAGI Ages 1-20	228,567	249,183	91%	19,842	22,551	87%	1.0091	1.0000	0.8986	0.8905
TANF-MAGI Ages 21+	58,643	66,707	87%	4,611	5,613	82%	1.1850	1.0000	0.9666	0.8158
Disabled-BCC Ages 1+	92,625	96,614	95%	7,668	8,218	93%	1.2352	1.0000	1.0240	0.8290
Newly Eligible Ages 19 to 44	113,284	145,020	78%	12,581	17,784	70%	1.0416	1.0000	0.9182	0.8815
Newly Eligible Ages 45 to 64	49,587	63,233	78%	4,883	6,868	71%	2.1075	1.0000	1.5704	0.7452
Composite	542,706	620,757	87%	49,585	61,034	81%		1.0000		0.8328

Rate Region 2

	Eligibility						Plan Factors			
	Total Population Membership			MCO Assigned Membership			All MCOs Plan Factors/Rates		MCO-Specific Plan Factors/Rates	
Rate Cell	Scored Recipients[1] (A)	Total Recipients[2] (B)	Percent of Population Scored[3] (C)	Scored Recipients[1] (D)	Total Recipients[2] (E)	Percent of Population Scored[3] (F)	Final Unadjusted Plan Factor (G)	Final Plan Factor[4] (H)	Final Unadjusted Plan Factor (I)	Final Plan Factor[4] (J)
TANF-MAGI Ages 1-20	64,751	74,354	87%	8,582	10,343	82%	0.9883	1.0000	0.8685	0.8788
TANF-MAGI Ages 21+	13,910	16,953	82%	1,997	2,549	78%	1.2584	1.0000	1.1860	0.9425
Disabled-BCC Ages 1+	29,581	32,724	90%	3,212	3,637	88%	0.9616	1.0000	0.8274	0.8604
Newly Eligible Ages 19 to 44	31,413	42,306	74%	4,656	6,818	68%	1.0855	1.0000	1.0059	0.9267
Newly Eligible Ages 45 to 64	14,291	19,517	73%	2,041	2,937	69%	2.0023	1.0000	1.6173	0.8077
Composite	153,946	185,854	82%	20,488	26,284	77%		1.0000		0.8742

1. Scored Recipients are the count of individuals that are eligible as of July 1, 2019 that were assigned an acuity factor in the 2019b risk assessment.

2. Total Recipients are the count of individuals based on their July 1, 2019 enrollment.

3. Scored Percentages are rounded down to the nearest whole percentage.

4. Final Plan Factors are adjusted to be budget neutral across all PH-MCOs for each region and rate cell combination.

Appendix D.6 - Sample Capitation Rate Summary

Southeast Zone: ABC Health Plan, Inc. Capitation Rates - For 2019 Q3

	Capitation Payment Rate Calculation								
Rate Region 1	Contracted Capitation / Maternity Rate	MLR Reduction Amount	Exclusions Less MLR Reduction Amount	Contracted Rate Less Applicable Exclusions	Lowest Contracted Rate in Region Less Applicable Exclusions	Final Plan Factor	Rate Subject to Risk Adjustment * Final Plan Factor	Final Risk Adjusted Rate	DHS Payment Rate Obligation, Per Member Per Day
	(A)	(B)	(C)	(D) = (A) - (B) - (C)	(E)	(F)	(G) = (E) * (F)	(H) = (D) - (E) + (C) + (G)	(I)
Under Age 1	$1,575.00	$7.75	$421.65	$1,145.60	$1,124.60	1.0000	$1,124.60	$1,567.25	$51.106
TANF-MAGI Ages 1-20	$223.00	$1.00	$37.80	$184.20	$184.20	0.8905	$164.03	$201.83	$6.581
TANF-MAGI Ages 21+	$426.00	$2.00	$34.40	$389.60	$389.60	0.8158	$317.84	$352.24	$11.486
Disabled-BCC Ages 1+	$1,285.00	$6.30	$244.65	$1,034.05	$1,022.35	0.8290	$847.53	$1,103.88	$35.996
Newly Eligible Ages 19 to 44	$378.00	$1.80	$46.15	$330.05	$326.00	0.8815	$287.37	$337.57	$11.008
Newly Eligible Ages 45 to 64	$833.00	$4.00	$69.15	$759.85	$751.85	0.7452	$560.28	$637.43	$20.786
Maternity Care	$9,895.00	$49.50		$9,845.50					

Rate Region 2	Contracted Capitation / Maternity Rate	MLR Reduction Amount	Exclusions Less MLR Reduction Amount	Contracted Rate Less Applicable Exclusions	Lowest Contracted Rate in Region Less Applicable Exclusions	Final Plan Factor	Rate Subject to Risk Adjustment * Final Plan Factor	Final Risk Adjusted Rate	DHS Payment Rate Obligation, Per Member Per Day
	(A)	(B)	(C)	(D) = (A) - (B) - (C)	(E)	(F)	(G) = (E) * (F)	(H) = (D) - (E) + (C) + (G)	(I)
Under Age 1	$1,045.00	$5.10	$421.65	$618.25	$615.85	1.0000	$615.85	$1,039.90	$33.910
TANF-MAGI Ages 1-20	$213.00	$1.00	$37.80	$174.20	$169.70	0.8788	$149.13	$191.43	$6.242
TANF-MAGI Ages 21+	$411.00	$2.00	$34.40	$374.60	$374.60	0.9425	$353.06	$387.46	$12.635
Disabled-BCC Ages 1+	$1,015.00	$5.00	$244.65	$765.35	$757.85	0.8604	$652.05	$904.20	$29.485
Newly Eligible Ages 19 to 44	$329.00	$1.50	$46.15	$281.35	$281.35	0.9267	$260.73	$306.88	$10.007
Newly Eligible Ages 45 to 64	$774.00	$3.75	$69.15	$701.10	$698.00	0.8077	$563.77	$636.02	$20.740
Maternity Care	$8,520.00	$42.60		$8,477.40					

1. The MLR Reduction Amount is removed from the Contracted Capitation Rate and is not a component of the Final Risk Adjusted Rate.
2. Exclusions Less MLR Reduction Amount include all components of the base capitation rate for which risk adjustment is not applied. For more information please see Appendix 3b of the CY 2019 HealthChoices Agreement.
3. The Final Risk Adjusted Rate is calculated by multiplying the Lowest Contracted Rate in Region Less Applicable Exclusions by the Final Plan Factor. The Under Age 1 rates and Maternity Care payment are not subject to risk adjustment.
4. For all rate cells, the DHS Payment Rate Obligation, Per Member Per Day is calculated by multiplying the Final Risk Adjusted Rate by three then dividing by the number of days in the application quarter.

APPENDIX E
POTENTIAL DATA IMPROVEMENT ACTIVITIES

Onsite reviews have been held with each PH-MCO contractor to evaluate the contractor's overall operations that could influence the encounter data reporting to the Commonwealth and the resulting risk scores. A byproduct of these reviews is a summarized list of the potential data improvement opportunities. This list may be helpful as PH-MCOs develop or review their strategic plan for improving encounter submissions. While evaluating improvement opportunities, the PH-MCOs should verify that none of the selected strategies violate the rule established in MCOPS Memo #06/2010-011, which disallows any records that were altered, adjusted or submitted by an MCO without supporting documentation from the submitting provider who originated the medical service in the form of a claim.

SUGGESTIONS TO IDENTIFY AREAS OF DATA LOSS OR INACCURACIES

- Evaluate sources (providers) submitting invalid or generic (e.g., ICD-10 codes R69 or R99) diagnoses.

- Measure changes in member disease conditions over time.

- Compare pharmaceutical utilization by prescribing providers to reported medical diagnoses.

- Assess consistency with medical management information such as:

  – Disease management rosters.

  – Health risk-assessment surveys.

  – Application of other risk-assessment tool(s).

- Perform medical chart reviews to assess data completeness and/or validate diagnoses.

- Audit diagnoses and/or records from claim receipt to encounter submission.

- Compare unduplicated PROMISe accepted encounters to MCO self-reported financial data/reports to verify completeness and accuracy of MCO encounter data submissions, including financial data by categories. Mercer provides financial data (billed amount and MCO

paid amounts) in the risk-adjustment feedback files for the purpose of the MCOs performing an evaluation of the encounter data submitted for completeness and accuracy.

- Evaluate processes of submitting complete inpatient encounters with accurate revenue centers for proper claim type identification (i.e., room and board required for inpatient claim type assignment).

- Evaluate processes for inpatient readmission services to ensure all diagnostic codes are captured in the combined encounter submission.

- Assess encounter submission results for acceptance by PROMISe.

- Identify services that should have been accompanied by an office or physician visit such as:

  – Ancillary service.

  – Inpatient stay.

  – Emergency room visit.

  – Specialist visit.

  – Prescription filled.

PROVIDER EDUCATION AND ASSISTANCE

- Educate providers, including office managers and billing staff, on the importance of diagnostic reporting and encounter submissions.

- Share study findings and rank performance.

- Form provider work groups to identify encounter submittal barriers.

- Provide standardized claim forms with chronic condition focus.

- Institute a corrective action plan for poor diagnostic reporters.

- Enhance provider profiling applications to include a risk measurement component.

- Distribute a mailing with helpful clinical and encounter information.

- Provide access to a web-based encounter portal for easier data submission.

- Provide member outreach assistance for patients who are not accessing preventive services or scheduling annual appointments for chronic conditions.

- Develop a recognition program that rewards providers for meeting established goals, which can be measured using claims/encounter data.

REIMBURSEMENT-RELATED STRATEGIES

- Implement incentive payments for each encounter submission, which are generally more effective when payments are made at intervals throughout the year.

- Impose sanctions on sub-par encounter submitters.

- Move sub-par capitated providers to FFS.

- Discontinue contracts with sub-par encounter submitters.

- Risk adjust provider payments.

- As a short-term incentive, payments may be made to providers outside of the claims system that revisit medical charts for potentially incorrect or missing diagnoses, when the payment is not contingent upon the identification of additional diagnoses.

PHYSICAL HEALTH-MANAGED CARE ORGANIZATION OPERATIONS

- Impose stricter edits on diagnostic reporting.

- Ensure acceptance/transfer of all available diagnostic positions for encounter submissions.

- Implement audit procedures to compare claims and accepted encounters on a regular basis.

- Submit all header-level diagnoses.

- Track encounters against transactional reports from the Commonwealth.

- Correct encounters not accepted by PROMISe.

- Create a suite of reports for regular encounter submittal monitoring.

- Strengthen vendor contracts for improved encounter submissions.

- Ensure all valid services are being submitted as encounters such as:

  – Capitated services.

  – Records where another entity such as a vendor who is entirely responsible for the encounter submissions.

  – Newborns waiting for a Medicaid ID should be submitted once the ID is received.

– Other reasons for non-submittal.

- Submit voids and adjustments for changes to claims from providers to ensure accurate information exists within PROMISe.

- Perform targeted audits to identify situations more likely to have inaccurate data (i.e., handwritten claims).

- Strengthen vendor oversight by reviewing vendor data for accuracy prior to PROMISe submission.

- Utilize software to customize claim edits that can be used to identify data anomalies.

- Submit the maximum number of diagnosis codes on encounters that the providers indicate on claims billed.

- Submit all encounters that are MCO zero-paid claims due to third-party payments to capture diagnostic information for risk adjustment.

- Verify newborn encounters are submitted with the newborn's Medicaid ID for accuracy in reporting diagnostic information.

- Ensure processes are in place to appropriately submit NDC codes and units associated with J-codes, per the PROMISe submission requirements for professional and outpatient services.

- Submit good National Provider Identifier and service locations for providers.

- Be proactive in identification and recovery of third party payments to ensure PH-MCO is gathering complete claims data and is the payer of last resort.

LONG-TERM MANAGEMENT STRATEGIES

- Review emerging patterns from case studies to develop a strategy.

- Measure effectiveness of initiatives by updating case studies.

- Create a long-term strategy/work plan (three to five years).

- Form an encounter work group comprised of at least management, claims and encounter staff.

- Have detailed processes to ensure vendors are conforming to the same standards as the MCO for encounter submissions and corrections.

- Develop a "sign off" process for data users to confirm data accuracy.

- Offer a suggestion box to share ideas throughout the organization.

- Assess new strategies on a pilot basis to understand reporting and financial ramifications and impacts for encounters.

- Create a work group to prepare for system changes and track progress using a work plan to ensure post-implementation processes do not negatively impact data and issues are resolved timely.

- Create a three-pronged approach comparing claims, encounters, and financial data to ensure all encounters are submitted and accepted by DHS.

APPENDIX F

PHYSICAL HEALTH-MANAGED CARE ORGANIZATION RISK SCORE CREDIBILTY GRID

The grid on the following page is used to assign assumed risk scores to a PH-MCO's unscored population in situations where the PH-MCO's scored population is between 0% and 100% credible. The assumed risk score for the unscored population is calculated by blending the average risk score of the PH-MCO's scored recipients with the average risk score of the region-wide scored recipients.

To use the grid, locate the cell that corresponds to the row with the appropriate count of scored MMs and the column with the appropriate MM scored percentage (rounded down) for the population. The resulting percentage is the percentage to apply to the average risk score of the PH-MCO's scored recipients. The remaining percentage is applied to the average risk score of the region-wide scored recipients. Both percentages sum to 100%.

Appendix F - PH-MCO Risk Score Credibility Grid

	Member Month Scored Percentage																									
Scored Member Months	≤ 25%	26%	27%	28%	29%	30%	31%	32%	33%	34%	35%	36%	37%	38%	39%	40%	41%	42%	43%	44%	45%	46%	47%	48%	49%	≥ 50%
< 612	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
612-623	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%
624-635	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	4%
636-647	0%	0%	0%	0%	0%	1%	1%	1%	1%	2%	2%	2%	2%	3%	3%	3%	3%	4%	4%	4%	4%	5%	5%	5%	5%	6%
648-659	0%	0%	0%	0%	1%	1%	1%	2%	2%	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%	6%	6%	6%	7%	7%	7%	8%
660-671	0%	0%	0%	1%	1%	2%	2%	2%	3%	3%	4%	4%	4%	5%	5%	6%	6%	6%	7%	7%	8%	8%	8%	9%	9%	10%
672-683	0%	0%	0%	1%	1%	2%	2%	3%	3%	4%	4%	5%	5%	6%	6%	7%	7%	8%	8%	9%	9%	10%	10%	11%	11%	12%
684-695	0%	0%	1%	1%	2%	2%	3%	3%	4%	5%	5%	6%	6%	7%	7%	8%	8%	9%	10%	10%	11%	11%	12%	12%	13%	14%
696-707	0%	0%	1%	1%	2%	3%	3%	4%	5%	5%	6%	7%	7%	8%	8%	9%	10%	10%	11%	12%	12%	13%	14%	14%	15%	16%
708-719	0%	0%	1%	2%	2%	3%	4%	5%	5%	6%	7%	7%	8%	9%	10%	10%	11%	12%	12%	13%	14%	15%	15%	16%	17%	18%
720-731	0%	0%	1%	2%	3%	4%	4%	5%	6%	7%	8%	8%	9%	10%	11%	12%	12%	13%	14%	15%	16%	16%	17%	18%	19%	20%
732-743	0%	0%	1%	2%	3%	4%	5%	6%	7%	7%	8%	9%	10%	11%	12%	13%	14%	14%	15%	16%	17%	18%	19%	20%	21%	22%
744-755	0%	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	21%	22%	23%	24%
756-767	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	21%	22%	23%	24%	26%
768-779	0%	1%	2%	3%	4%	5%	6%	7%	8%	10%	11%	12%	13%	14%	15%	16%	17%	19%	20%	21%	22%	23%	24%	25%	26%	28%
780-791	0%	1%	2%	3%	4%	6%	7%	8%	9%	10%	12%	13%	14%	15%	16%	18%	19%	20%	21%	22%	24%	25%	26%	27%	28%	30%
792-803	0%	1%	2%	3%	5%	6%	7%	8%	10%	11%	12%	14%	15%	16%	17%	19%	20%	21%	23%	24%	25%	26%	28%	29%	30%	32%
804-815	0%	1%	2%	4%	5%	6%	8%	9%	10%	12%	13%	14%	16%	17%	19%	20%	21%	23%	24%	25%	27%	28%	29%	31%	32%	34%
816-827	0%	1%	2%	4%	5%	7%	8%	10%	11%	12%	14%	15%	17%	18%	20%	21%	23%	24%	25%	27%	28%	30%	31%	33%	34%	36%
828-839	0%	1%	3%	4%	6%	7%	9%	10%	12%	13%	15%	16%	18%	19%	21%	22%	24%	25%	27%	28%	30%	31%	33%	34%	36%	38%
840-851	0%	1%	3%	4%	6%	8%	9%	11%	12%	14%	16%	17%	19%	20%	22%	24%	25%	27%	28%	30%	32%	33%	35%	36%	38%	40%
852-863	0%	1%	3%	5%	6%	8%	10%	11%	13%	15%	16%	18%	20%	21%	23%	25%	26%	28%	30%	31%	33%	35%	36%	38%	40%	42%
864-875	0%	1%	3%	5%	7%	8%	10%	12%	14%	15%	17%	19%	21%	22%	24%	26%	28%	29%	31%	33%	35%	36%	38%	40%	42%	44%
876-887	0%	1%	3%	5%	7%	9%	11%	12%	14%	16%	18%	20%	22%	23%	25%	27%	29%	31%	33%	34%	36%	38%	40%	42%	44%	46%
888-899	0%	1%	3%	5%	7%	9%	11%	13%	15%	17%	19%	21%	23%	24%	26%	28%	30%	32%	34%	36%	38%	40%	42%	44%	46%	48%
900-911	0%	2%	4%	6%	8%	10%	12%	14%	16%	18%	20%	22%	24%	26%	28%	30%	32%	34%	36%	38%	40%	42%	44%	46%	48%	50%
912-923	0%	2%	4%	6%	8%	10%	12%	14%	16%	18%	20%	22%	24%	27%	29%	31%	33%	35%	37%	39%	41%	43%	45%	47%	49%	52%
924-935	0%	2%	4%	6%	8%	10%	12%	15%	17%	19%	21%	23%	25%	28%	30%	32%	34%	36%	38%	41%	43%	45%	47%	49%	51%	54%
936-947	0%	2%	4%	6%	8%	11%	13%	15%	17%	20%	22%	24%	26%	29%	31%	33%	35%	38%	40%	42%	44%	47%	49%	51%	53%	56%
948-959	0%	2%	4%	6%	9%	11%	13%	16%	18%	20%	23%	25%	27%	30%	32%	34%	37%	39%	41%	44%	46%	48%	51%	53%	55%	58%
960-971	0%	2%	4%	7%	9%	12%	14%	16%	19%	21%	24%	26%	28%	31%	33%	36%	38%	40%	43%	45%	48%	50%	52%	55%	57%	60%
972-983	0%	2%	4%	7%	9%	12%	14%	17%	19%	22%	24%	27%	29%	32%	34%	37%	39%	42%	44%	47%	49%	52%	54%	57%	59%	62%
984-995	0%	2%	5%	7%	10%	12%	15%	17%	20%	23%	25%	28%	30%	33%	35%	38%	40%	43%	46%	48%	51%	53%	56%	58%	61%	64%
996-1007	0%	2%	5%	7%	10%	13%	15%	18%	21%	23%	26%	29%	31%	34%	36%	39%	42%	44%	47%	50%	52%	55%	58%	60%	63%	66%
1008-1019	0%	2%	5%	8%	10%	13%	16%	19%	21%	24%	27%	29%	32%	35%	38%	40%	43%	46%	48%	51%	54%	57%	59%	62%	65%	68%
1020-1031	0%	2%	5%	8%	11%	14%	16%	19%	22%	25%	28%	30%	33%	36%	39%	42%	44%	47%	50%	53%	56%	58%	61%	64%	67%	70%
1032-1043	0%	2%	5%	8%	11%	14%	17%	20%	23%	25%	28%	31%	34%	37%	40%	43%	46%	48%	51%	54%	57%	60%	63%	66%	69%	72%
1044-1055	0%	2%	5%	8%	11%	14%	17%	20%	23%	26%	29%	32%	35%	38%	41%	44%	47%	50%	53%	56%	59%	62%	65%	68%	71%	74%
1056-1067	0%	3%	6%	9%	12%	15%	18%	21%	24%	27%	30%	33%	36%	39%	42%	45%	48%	51%	54%	57%	60%	63%	66%	69%	72%	76%
1068-1079	0%	3%	6%	9%	12%	15%	18%	21%	24%	28%	31%	34%	37%	40%	43%	46%	49%	53%	56%	59%	62%	65%	68%	71%	74%	78%
1080-1091	0%	3%	6%	9%	12%	16%	19%	22%	25%	28%	32%	35%	38%	41%	44%	48%	51%	54%	57%	60%	64%	67%	70%	73%	76%	80%
1092-1103	0%	3%	6%	9%	13%	16%	19%	22%	26%	29%	32%	36%	39%	42%	45%	49%	52%	55%	59%	62%	65%	68%	72%	75%	78%	82%
1104-1115	0%	3%	6%	10%	13%	16%	20%	23%	26%	30%	33%	36%	40%	43%	47%	50%	53%	57%	60%	63%	67%	70%	73%	77%	80%	84%
1116-1127	0%	3%	6%	10%	13%	17%	20%	24%	27%	30%	34%	37%	41%	44%	48%	51%	55%	58%	61%	65%	68%	72%	75%	79%	82%	86%
1128-1139	0%	3%	7%	10%	14%	17%	21%	24%	28%	31%	35%	38%	42%	45%	49%	52%	56%	59%	63%	66%	70%	73%	77%	80%	84%	88%
1140-1151	0%	3%	7%	10%	14%	18%	21%	25%	28%	32%	36%	39%	43%	46%	50%	54%	57%	61%	64%	68%	72%	75%	79%	82%	86%	90%
1152-1163	0%	3%	7%	11%	14%	18%	22%	25%	29%	33%	36%	40%	44%	47%	51%	55%	58%	62%	66%	69%	73%	77%	80%	84%	88%	92%
1164-1175	0%	3%	7%	11%	15%	18%	22%	26%	30%	33%	37%	41%	45%	48%	52%	56%	60%	63%	67%	71%	75%	78%	82%	86%	90%	94%
1176-1187	0%	3%	7%	11%	15%	19%	23%	26%	30%	34%	38%	42%	46%	49%	53%	57%	61%	65%	69%	72%	76%	80%	84%	88%	92%	96%
1188-1199	0%	3%	7%	11%	15%	19%	23%	27%	31%	35%	39%	43%	47%	50%	54%	58%	62%	66%	70%	74%	78%	82%	86%	90%	94%	98%
≥ 1200	0%	4%	8%	12%	16%	20%	24%	28%	32%	36%	40%	44%	48%	52%	56%	60%	64%	68%	72%	76%	80%	84%	88%	92%	96%	100%

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