



AHRQ QIs Fact Sheet:  
FAQs on the SAS QI and WinQI v2020  
Software

**AHRQ Quality Indicators (QIs) Software Product Information**

**1. What year of data do the SAS QI and WinQI v2020 software support?**

The v2020 software supports Fiscal Year (FY) 2020 (October 2019 to September 2020) data.

**2. Is the v2020 software backwards compatible?**

Yes, the software is backwards compatible, meaning that it supports discharges classified under International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS) retroactively through October 2015.

**3. Does the v2020 software address the 2019 Novel Coronavirus (COVID-19)?**

The formats in v2020 do not include COVID-19 ICD-10-CM/PCS codes.

AHRQ anticipates that the COVID-19 pandemic will have a substantial impact on QI rates because of healthcare delivery system changes in case mix and volume.

- **Case mix.** As hospitals prepared for COVID-19 surges and responded to Federal directives, COVID-19 has shifted case mix away from elective surgeries. This may decrease the number of surgical discharges and change the risk profile of the reference population underpinning the QI risk-adjustment methodologies.
- **Volume.** Similarly, the volume of discharges is likely to decrease, as short-stay elective surgeries are cancelled or delayed, whereas longer-stay emergency or medical discharges become more prevalent. These changes impact the reliability of individual and composite indicators, which is primarily driven by volume.

Given the publicly available nature of the QI software, in the future AHRQ will provide updated guidance on how users might adapt their input data files to account for COVID-19. While modifying the input data file for COVID-19 cases will work for both WinQI and SAS QI, AHRQ also plans to provide documentation to assist users in directly modifying the SAS QI code to exclude discharges with COVID-19, if desired.

More information is available at:

[https://www.qualityindicators.ahrq.gov/Downloads/Resources/User\\_note\\_COVID.pdf](https://www.qualityindicators.ahrq.gov/Downloads/Resources/User_note_COVID.pdf).

This document will be updated periodically.

**4. What processes does AHRQ follow when determining what changes and refinements to make when the QI software is updated?**

Potential refinements to the QI software are based on user feedback, literature review and environmental scans, and diagnosis and procedure coding changes. AHRQ evaluates these potential changes for their feasibility and priority, and those selected for implementation are tested and reviewed before being incorporated into new releases of the AHRQ QI software.

**Risk-Adjusted Software Information**

**5. Is the AHRQ QI v2020 software (SAS QI and WinQI) risk adjusted?**

Yes, risk adjustment is supported in the SAS QI and WinQI v2020 ICD-10-CM/PCS software. Risk adjustment is available for the following indicator groups by module:

- Prevention Quality Indicator (PQI) area-level indicators
- Inpatient Quality Indicator (IQI) hospital-level indicators
- Patient Safety Indicator (PSI) hospital-level indicators
- Pediatric Quality Indicator (PDI) area-level and hospital-level indicators. *PDI hospital-level risk adjustment is new in the AHRQ QI v2020 software.*

**Specific Coding and Indicator Updates in v2020**

**6. What coding updates are included in the SAS QI and WinQI v2020 software?**

The v2020 software release includes coding updates to align with the latest ICD-10-CM/PCS coding guidance. For a complete list of the indicator level changes, refer to the Change Logs for each module which are available at:

- Prevention Quality Indicators (PQIs):\_  
[https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V2020/ChangeLog\\_PQI\\_v2020.pdf](https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V2020/ChangeLog_PQI_v2020.pdf)
- Inpatient Quality Indicators (IQIs):\_  
[https://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V2020/ChangeLog\\_IQI\\_v2020.pdf](https://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V2020/ChangeLog_IQI_v2020.pdf)
- Patient Safety Indicators (PSIs):\_  
[https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2020/ChangeLog\\_PSI\\_v2020.pdf](https://www.qualityindicators.ahrq.gov/Downloads/Modules/PSI/V2020/ChangeLog_PSI_v2020.pdf)
- Pediatric Quality Indicators (PDIs):\_  
[https://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V2020/ChangeLog\\_PD I\\_v2020.pdf](https://www.qualityindicators.ahrq.gov/Downloads/Modules/PDI/V2020/ChangeLog_PD I_v2020.pdf)

**7. Is there a log of code-specific changes for each indicator?**

AHRQ tries to provide as much detail as possible around the changes in the change log documents. To address questions around identifying codes that changed, please know that although some updates are small, many fiscal year updates result in adding/removing a large number of codes. AHRQ explored the idea for listing code changes in the change log, but the documents become unwieldy.

As an alternative, upon request, AHRQ can provide the user with an Excel version of the technical specifications which can be used to compare codes from one version to another using any file compare software.

**8. What are some of the major updates in the SAS QI and WinQI v2020 software?**

Some major updates that are included in the v2020 QI software include:

- The v2020 SAS QI and WinQI software is risk adjusted using 2017 HCUP State Inpatient Databases (SID) data.
  - Hospital-level PDIs are now risk-adjusted in v2020. The PDI module utilizes the Clinical Classifications Software Refined (CCSR) for ICD-10-CM diagnoses to define risk-adjustment variables
- Implemented coding updates: (1) based on fiscal year 2020 ICD-10-CM/PCS, (2) is compatible with ICD-10-CM/PCS hospital data for FY16-FY20, and (3) coding changes impact all software modules.
- PQIs and area-level PDIs risk adjustment accounts for age and gender, and an optional adjustment for poverty.
  - Poverty is defined using a Census poverty definition
  - Computes county-level risk adjustment
- All PSI and PDI exclusions are now denominator exclusions.
  - POA dependent exclusions were switched from numerator to strictly denominator exclusions. Associated variables remain in the program in case they are needed for future for POA exclusions.
- The AHRQ QI v2020 Software now includes an option to calibrate smoothed rates and composite values.
  - The default option calibrates using the 2017 HCUP SID reference population.
  - An alternative option is to calibrate to the user's input data. This option is provided to large health care systems or states who want to calibrate the predicted QI rates within the system. The caveat is that the interpretation of the rates may be different since the software would still use 2017 HCUP reference population rate as multiplier for risk adjustment rates.

**9. What are some of the improvements made to the v2020 SAS QI software?**

- Added technical assistance documentation on running the Medicare Severity-

Diagnosis Related Group (MS-DRG) grouper for PSI and PDI in the release notes that are included within the respective software packages.

- Improve labeling, comments, and consistency in names for variables, parameters, and files.
- Instructions for using the v2020 SAS QI software is available at:  
[https://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V2020/Software\\_Inst\\_SASQI\\_v2020\\_July\\_2020.pdf](https://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V2020/Software_Inst_SASQI_v2020_July_2020.pdf)

**10. What are some of the improvements made to the v2020 WinQI software?**

- The software will notify users of all software updates. By accepting the v2020 update, it will automatically uninstall the prior version and install v2020.
- With risk adjustment added, running a large input file (i.e.,  $\geq 3$  million rows) can take a few hours to finish.
- Options are added in WinQI v2020 to calibrate smoothed rates and composite values using observed to expected ratio.
- All “provider level” labels now updated to “hospital level” in WinQI v2020, such as Provider Level Report is now called “Hospital Level Report”. This is done to reflect the purpose of the reports clearly.
- Hospital-level and area-level reports include observed, expected, reference population, risk- adjusted, and smoothed rates.
- New on-screen visual cues are added to notify users about the software updates.
- Instructions for using the v2020 WinQI software is available at:  
[https://www.qualityindicators.ahrq.gov/Downloads/Software/WinQI/V2020/Software\\_Inst\\_WINQI\\_V2020\\_July\\_2020.pdf](https://www.qualityindicators.ahrq.gov/Downloads/Software/WinQI/V2020/Software_Inst_WINQI_V2020_July_2020.pdf)

**11. Why is the Pediatric Quality Indicator NQI 02 (Neonatal Mortality Rate) still suppressed in the v2020 software?**

NQI 02 is suppressed in part because of discrepancies in how individual states define a live birth. For example, several states do not include qualifying language distinguishing a heartbeat from transient cardiac contractions and distinguishing respirations from fleeting respiratory efforts or gasps. Thus, in some cases, induced terminations of pregnancy are misclassified as live births because there were “transient cardiac contractions” and “fleeting respiratory efforts or gasps.”

NQI 02 does not offer a true neonatal mortality rate because there is no linkage of records for patients who are transferred from one hospital to another, or from a hospital to another setting of care. AHRQ is reviewing the specifications and the indicator will be updated or retired in a future version.

**12. Why was the Comorbidity Software not updated for the AHRQ QI v2020 software?**

The development of the QI software takes several months, and during the time of development, the Elixhauser Comorbidity Software for ICD-10-CM/PCS v2020 was not

available. The v2020 AHRQ QI software uses v2019 Elixhauser Comorbidity Software.

## Interpreting AHRQ QI Results

### **13. How does AHRQ recommend that users interpret QI rates calculated with the v2020 software?**

All measures that use the ICD-10 CM/PCS coding standards may see some variation in rates resulting from the transition in coding systems. AHRQ recommends using v2020 rates as a starting point for internal assessment and not for comparison across providers. Users may review discharge-level results to determine if evidence in the administrative record indicates occurrence of an adverse event. Further information about the ICD-10-CM/PCS transition and use of administrative data is available at: [https://www.hcup-us.ahrq.gov/datainnovations/icd10\\_resources.jsp](https://www.hcup-us.ahrq.gov/datainnovations/icd10_resources.jsp)

### **14. What do I need to know about the v2020 QI population file?**

The updated QI population file contains intercensal and postcensal estimates of county-level populations from years 2000 – 2019 for use with area-level QIs. Population categories include single-sex year age group, sex, race and Hispanic origin.

Details about the population methodology is available at: [http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V2020/AHRQ\\_QI\\_v2020\\_ICD10\\_Population\\_File.pdf](http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V2020/AHRQ_QI_v2020_ICD10_Population_File.pdf)

### **15. Can I use the v2020 QI population file with prior versions of SAS QI software?**

The v2020 QI population file has the same structure as the previous population files. Therefore, it can be seamlessly used with all previous versions of SAS QI software.

## Using AHRQ Quality Indicators

### **16. Is technical assistance available for use of the AHRQ QIs?**

Yes. Users may submit questions or comments to [QISupport@ahrq.hhs.gov](mailto:QISupport@ahrq.hhs.gov).