

# Antimicrobial Stewardship Quality Improvement with SMRRT Software

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## Learning objectives

- ▶ Analyze antibiotic prescribing habits with software to generate provider report cards
- ▶ Implement targeted interventions from software as part of a QAPI

## Overview

- ▶ What is SMRRT?
- ▶ Obtaining and setting up the software.
- ▶ Using the software.
- ▶ Facility/departmental reports and provider report cards.
- ▶ Developing targeted interventions.
- ▶ Assessing impact.

## What is SMRRT?

**SMRRT**

- ▶ The Simple, Modular, RPMS Reporting Tool (SMRRT, pronounced “smart”).
- ▶ Developed by LT Stauffer to simplify and automate extraction and analysis of commonly requested data from RPMS.
- ▶ Allow facilities to better meet CMS and TJC antimicrobial stewardship monitoring requirements, and it provides a mechanism for standardized data reporting across IHS.
- ▶ Uses very lightweight modules that can be developed for nearly any type of data collection and analysis, for example, to monitor antibiotic prescribing habits and automatically generate provider report cards.
- ▶ SMRRT Modules can turn what used to take days/weeks of manual chart reviews into an automated process that takes a few minutes.

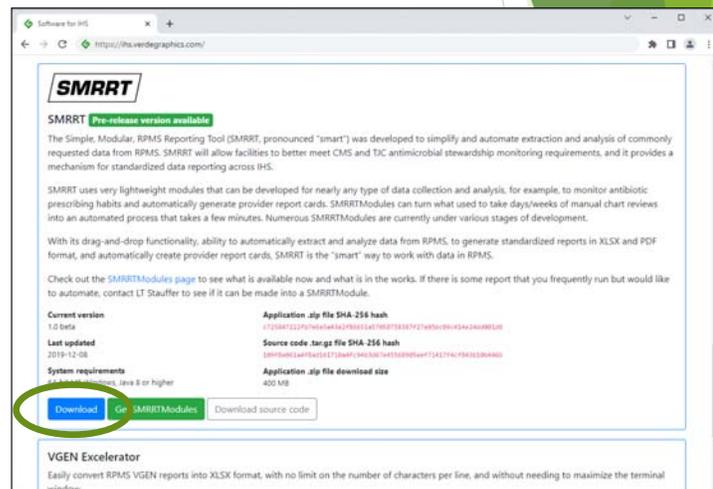
## What is SMRRT?



- ▶ SMRRT
  - ▶ Large download (400 MB).
  - ▶ Does the “heavy lifting”.
- ▶ SMRRTModules
  - ▶ Small downloads (100 kB).
  - ▶ Contain the specific algorithm to adjudicate patient cases and generate reports.
  - ▶ Anyone with knowledge of Java programming and RPMS can create or customize SMRRTModules.

## Obtaining and setting up SMRRT

- ▶ <https://ihs.verdegraphics.com/>
- ▶ System requirements:
  - ▶ 64-bit Windows 7 or higher.
  - ▶ Java 8 or higher.
  - ▶ Terminal client that allows session log capture (e.g. SecureCRT).
- ▶ Click the blue Download button and save to your PC.



The screenshot shows a web browser window displaying the SMRRT website. The page features the SMRRT logo and a "Pre-release version available" badge. The main content describes the tool's purpose and provides system requirements. At the bottom, there are three buttons: "Download" (highlighted with a red circle), "Get SMRRTModules", and "Download source code".

**SMRRT** Pre-release version available

The Simple, Modular, RPMS Reporting Tool (SMRRT, pronounced “smart”) was developed to simplify and automate extraction and analysis of commonly requested data from RPMS. SMRRT will allow facilities to better meet CMS and TIC antimicrobial stewardship monitoring requirements, and it provides a mechanism for standardized data reporting across IHS.

SMRRT uses very lightweight modules that can be developed for nearly any type of data collection and analysis, for example, to monitor antibiotic prescribing habits and automatically generate provider report cards. SMRRTModules can turn what used to take days/weeks of manual chart reviews into an automated process that takes a few minutes. Numerous SMRRTModules are currently under various stages of development.

With its drag-and-drop functionality, ability to automatically extract and analyze data from RPMS, to generate standardized reports in XLSX and PDF format, and automatically create provider report cards, SMRRT is the “smart” way to work with data in RPMS.

Check out the [SMRRTModules page](#) to see what is available now and what is in the works. If there is some report that you frequently run but would like to automate, contact LT Stauffer to see if it can be made into a SMRRTModule.

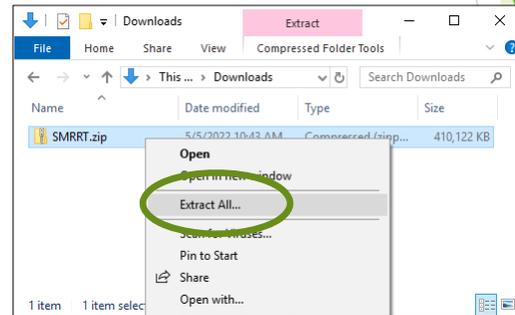
<b>Current version</b> 1.0 beta	<b>Application .zip file SHA-256 hash</b> 075067222f796f0463a2789551615507838727959590143a2a488208
<b>Last updated</b> 2019-12-08	<b>Source code .tar.gz file SHA-256 hash</b> 599f96813a9f8a211726a7f49330794558989a9734217a4f9a19328a8d0
<b>System requirements</b> 64-bit Windows, Java 8 or higher	<b>Application .zip file download size</b> 400 MB

[Download](#) [Get SMRRTModules](#) [Download source code](#)

**VEGEN Exclerator**  
Easily convert RPMS VGEN reports into XLSX format, with no limit on the number of characters per line, and without needing to maximize the terminal window.

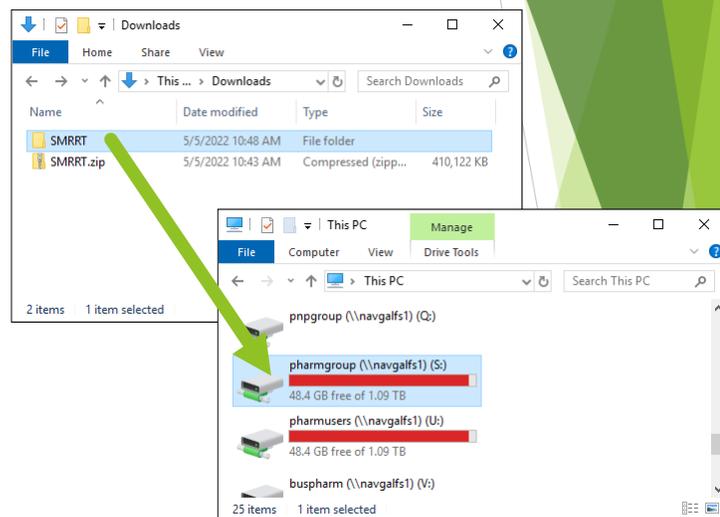
## Obtaining and setting up SMRRT

- ▶ Extract the SMRRT.zip file on your PC. Do not perform the extraction on a network drive.



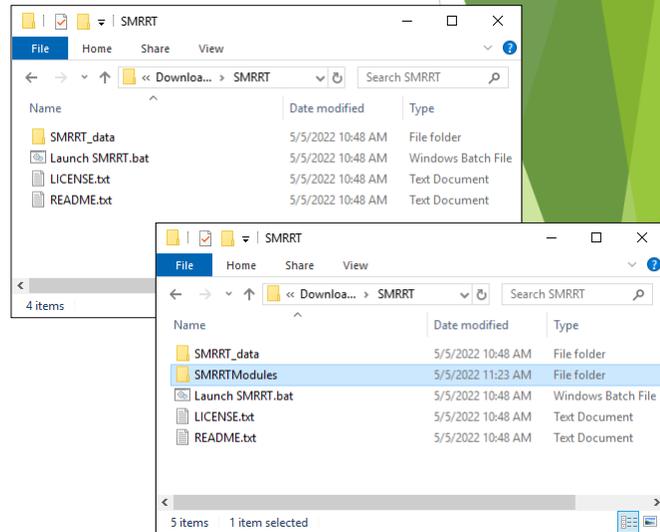
## Obtaining and setting up SMRRT

- ▶ After the extraction is complete, you may move the extracted SMRRT folder to a network drive so that others may use it too.
- ▶ It's a large folder (almost 1 GB when unzipped), so it will take some time to copy to the network.
- ▶ You can delete the zip file and the SMRRT folder in your Downloads folder after copying it to a network drive.



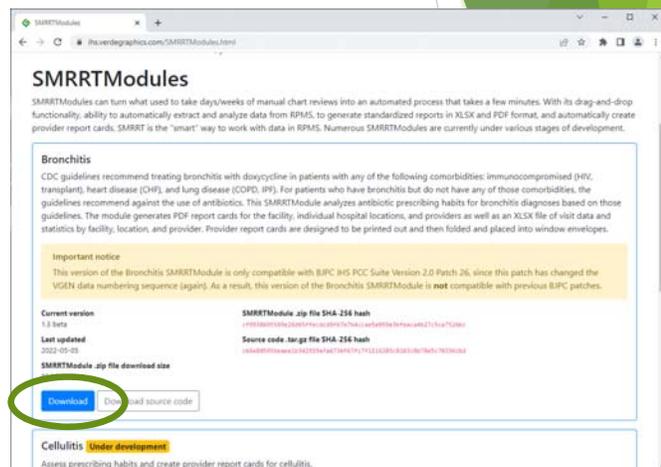
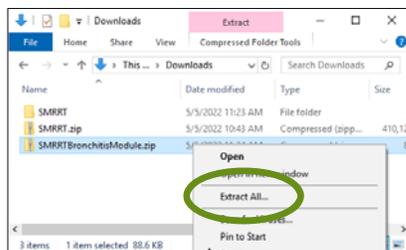
## Obtaining and setting up SMRRT

- ▶ Open the SMRRT folder (on the network if you copied it there).
- ▶ Create a new folder called SMRRTModules where the module(s) will be kept.



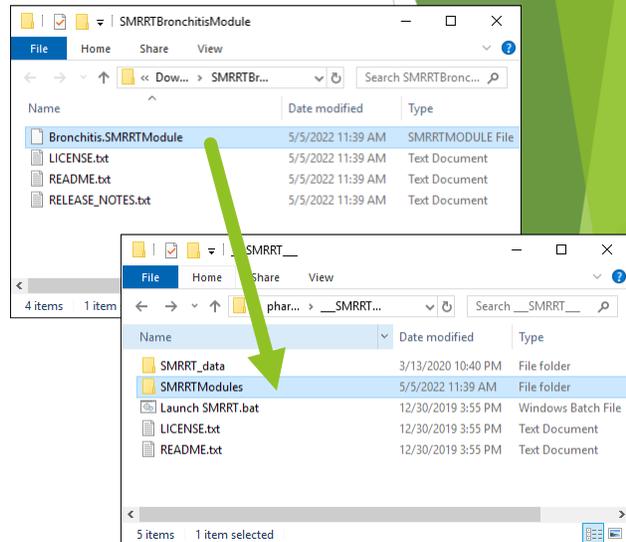
## Obtaining and setting up SMRRT

- ▶ Download the bronchitis module from the SMRRTModules page on <https://ihs.verdegraphics.com/>
- ▶ Then extract the module zip file.



## Obtaining and setting up SMRRT

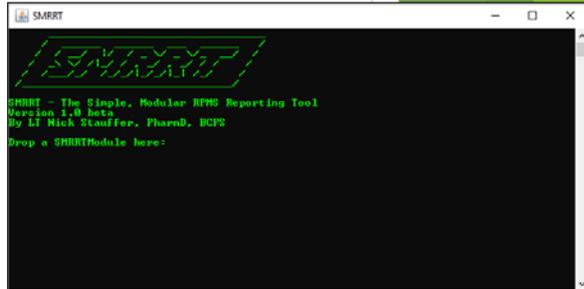
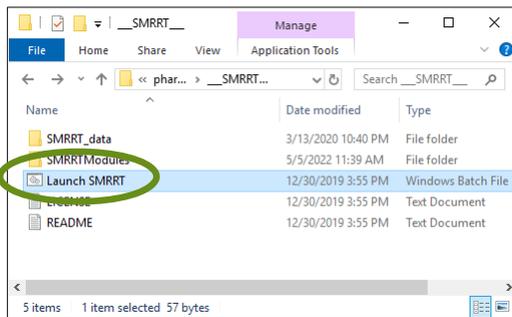
- ▶ Copy the Bronchitis.SMRRTModule file inside the unzipped folder to the SMRRTModules folder created previously.
- ▶ SMRRT is now ready to work!
- ▶ (Don't forget to clean up your Downloads folder when all the files have been moved into their final locations.)



## Using SMRRT

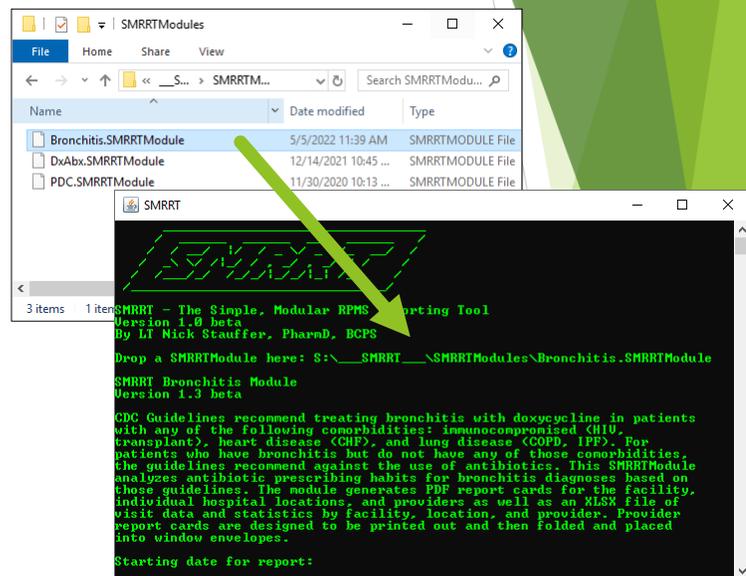
## Launching the software

- ▶ Navigate to the SMRRT folder and double click Launch SMRRT.
- ▶ The SMRRT program window will open.



## Loading the bronchitis module

- ▶ Open the SMRRTModules folder.
- ▶ Drag and drop the Bronchitis.SMRRTModule file onto the SMRRT program window.
- ▶ Click the SMRRT program window and then press the enter key to load the module.



## Using the software

- ▶ Enter the desired starting date and ending dates for the report. Use a 4-digit year.
- ▶ SMRRT will then automatically generate all the code required to run the report in RPMS and copy this code to the clipboard.
- ▶ Log in to RPMS using your favorite terminal client.
- ▶ Navigate to the main VGEN menu.
- ▶ Turn on session logging now.
- ▶ No need to maximize the window.
- ▶ Click Edit -> Paste to paste and run the report code generated by SMRRT.

The image shows two overlapping windows. The top window is a terminal titled 'SMRRT' with a black background and white text. It contains instructions for running the software, including starting and ending dates (1/1/2019 to 12/31/2019) and a list of steps for gathering data. The bottom window is 'gal-rpms - SecureCRT' with a white background and black text. A context menu is open over the terminal, with the 'Paste' option highlighted in blue. The menu also includes options like 'Paste as Quotation', 'Select All', 'Find...', 'Print Selection', 'Go to Chat Window', 'Clear Scrollback', 'Clear Screen', 'Clear Screen and Scrollback', and 'Reset'.

## Using the software

- ▶ The report will automatically run.
- ▶ Do not press any keys in the SecureCRT window while the report is running.
- ▶ When the report has finished turn off the session log in your terminal client.

The image shows a terminal window titled 'gal-rpms - SecureCRT'. The terminal displays the following text:

```

gal-rpms
VISIT Selection Criteria:
Encoder Date range: JAN 01, 2019 to DEC 31, 2019
Primary Dx (POV): A set of ICD Diagnoses codes, including J20.0

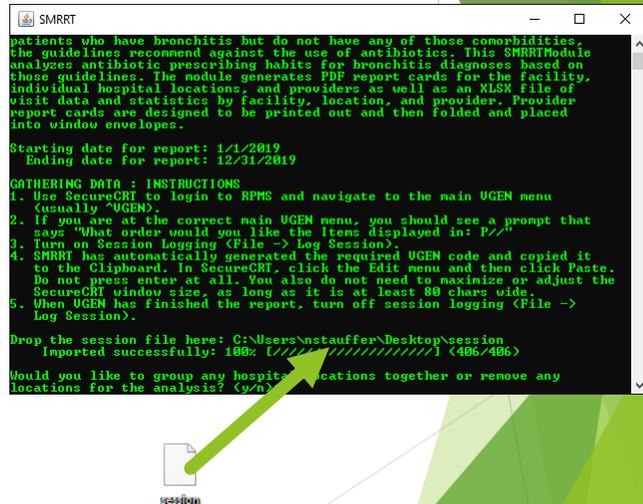
REPORT/OUTPUT Type:
PRINT Items Selected:
Patient Name - column width
Chart # - column width
Date of Birth - column width
Visit DateTime - column width
Hospital Location - column width
Primary Prov Name - column width
Primary Provider ID# - column width
Primary Dx (POV) - column width
Prob List Dx (ANY) - column width
RX Ordering Provider - column width
Medications - column width
Total Report width (including column margins - 2 spaces): 22

SORTING Item:
Visits will be sorted by: Visit DateTime

DEVICE: HOME// 0:80:999999999999 VT
  
```

## Using the software

- ▶ Drag and drop the session file into the SMRRT program window and then press enter.
- ▶ The bronchitis module will then ask if you want to group or remove any hospital locations.
  - ▶ Combine all internal medicine provider locations, etc.
  - ▶ Remove invalid visits.



```

SMRRT
patients who have bronchitis but do not have any of those comorbidities. The guidelines recommend against the use of antibiotics. This SMRRTModule analyzes antibiotic prescribing habits for bronchitis diagnoses based on these guidelines. The module generates PDF report cards for the facility, individual hospital locations, and providers, as well as an XLSX file of visit data and statistics by facility, location, and provider. Provider report cards are designed to be printed out and then folded and placed into window envelopes.

Starting date for report: 1/1/2019
Ending date for report: 12/31/2019

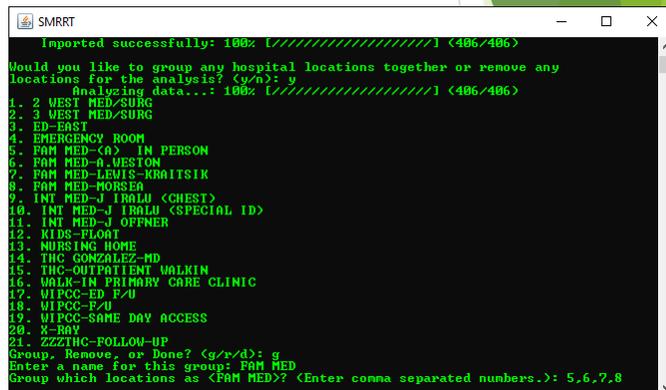
GATHERING DATA : INSTRUCTIONS
1. Use SecureCRT to login to RPMS and navigate to the main UGEN menu (usually "UGEN").
2. If you are at the correct main UGEN menu, you should see a prompt that says "What order would you like the items displayed in: P//".
3. Turn on Session Logging (File -> Log Session).
4. SMRRT has automatically generated the required UGEN code and copied it to the Clipboard. In SecureCRT, click the Edit menu and then click Paste. Do not press enter at all. You also do not need to maximize or adjust the SecureCRT window size, as long as it is at least 80 chars wide.
5. When UGEN has finished the report, turn off session logging (File -> Log Session).

Drop the session file here: C:\Users\Instauffer\Desktop\session
Imported successfully: 100% [//////////] (406/406)

Would you like to group any hospital locations together or remove any locations for the analysis? (y/n)
  
```

## Using the software

- ▶ Enter g to group (or rename) locations.
  - ▶ Combine all the FAM MED provider locations as a single "FAM MED" group, etc.



```

SMRRT
Imported successfully: 100% [//////////] (406/406)

Would you like to group any hospital locations together or remove any locations for the analysis? (y/n): y
Analyzing data...: 100% [//////////] (406/406)
1. 2 WEST MED/SURG
2. 3 WEST MED/SURG
3. ED-EAST
4. EMERGENCY ROOM
5. FAM MED-(A) IN PERSON
6. FAM MED-A WESTON
7. FAM MED-LEWIS-KRAITSIK
8. FAM MED-MORSE
9. INT MED-J IRLAU (CHEST)
10. INT MED-J IRLAU (SPECIAL ID)
11. INT MED-J OFFNER
12. KIDS-FLORI
13. NURSING HOME
14. THC GONZALEZ-MD
15. THC-OUTPATIENT WALKIN
16. WALC-IN PRIMARY CARE CLINIC
17. WIPCC-ED F/U
18. WIPCC-F/U
19. WIPCC-SAME DAY ACCESS
20. X-RAY
21. ZZZZTC-FOLLOW-UP
Group, Remove, or Done? (g/r/d): g
Enter a name for this group: FAM MED
Group which locations as <FAM MED>? (Enter comma separated numbers.): 5,6,7,8
  
```

## Using the software

- ▶ Enter r to remove a location.
  - ▶ Removed pediatric clinic, etc.

```

SMRRT
6. TOHATCHI
7. WIPCC
Group, Remove, or Done? (g/r/d): R
Remove which locations? (Enter comma separated numbers.): 5
    Analyzing data...: 100% [#####] (401/401)
1. EMERGENCY DEPT
2. PAM MED
3. INPATIENT DC
4. INT MED
5. TOHATCHI
6. WIPCC
Group, Remove, or Done? (g/r/d):
  
```

## Using the software

- ▶ Enter d when done grouping and removing hospital locations.
- ▶ SMRRT will prompt you for the location to save the Excel file.
- ▶ Then, SMRRT will analyze the data and then generate the Excel file.
- ▶ Next, SMRRT will then prompt you for the location to save the PDF report.
- ▶ After that, SMRRT will then generate the PDF report, which will take a minute.
- ▶ SMRRT will let you know when it has finished working.

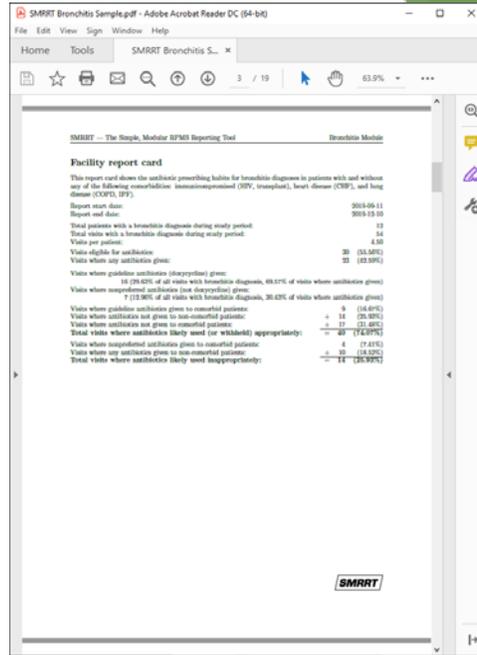
```

SMRRT
6. TOHATCHI
7. WIPCC
Group, Remove, or Done? (g/r/d): R
Remove which locations? (Enter comma separated numbers.): 5
    Analyzing data...: 100% [#####] (401/401)
1. EMERGENCY DEPT
2. PAM MED
3. INPATIENT DC
4. INT MED
5. TOHATCHI
6. WIPCC
Group, Remove, or Done? (g/r/d): d
Choose location to save XLSX File: C:\Users\Instauffer\Desktop\data.xlsx
Data written successfully: 100% [#####] (498/498)
Choose location to save PDF report file: C:\Users\Instauffer\Desktop\data.pdf
    Generating PDF...: 80% [#####] (4/5)
  
```



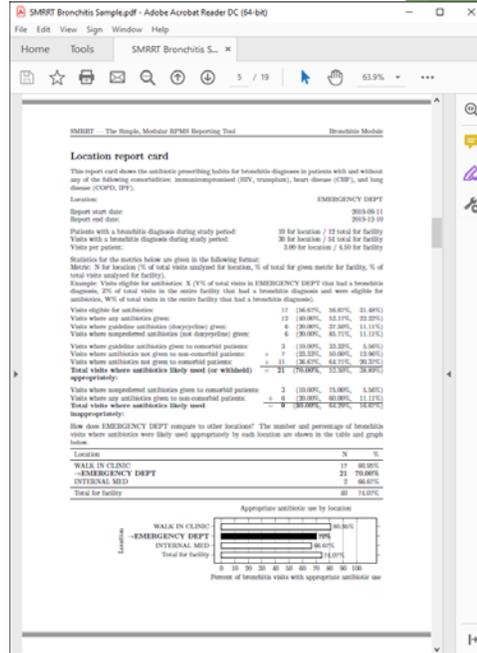
## Using the reports

- ▶ For the bronchitis module, the PDF report will contain:
  - ▶ The module information page.
  - ▶ A report card for the hospital overall.



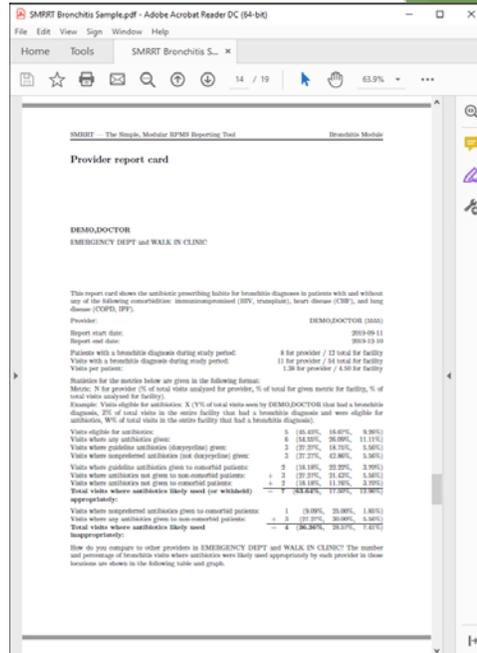
## Using the reports

- ▶ For the bronchitis module, the PDF report will contain:
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  - ▶ A report card for each hospital location.



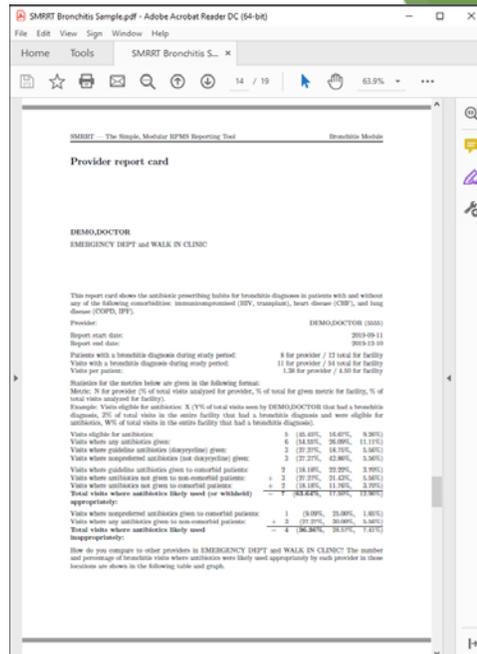
## Using the reports

- ▶ For the bronchitis module, the PDF report will contain:
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  - ▶ A report card for the hospital overall.
  - ▶ A report card for each hospital location.
  - ▶ A report card for each provider.



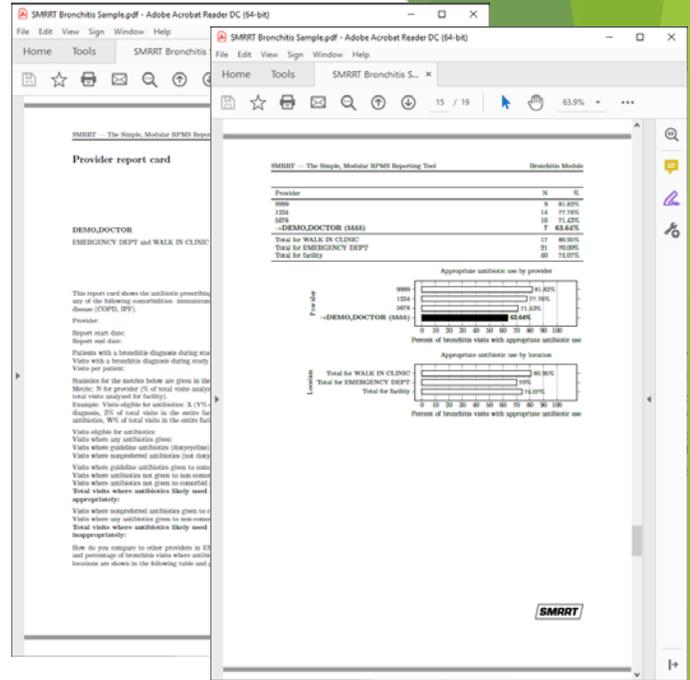
## Provider report cards

- ▶ Designed to be printed, folded, placed in standard window envelopes, and then given to providers.
- ▶ Informs providers of individual performance metrics.



## Provider report cards

- ▶ Designed to be printed, folded, placed in standard window envelopes, and then given to providers.
- ▶ Informs providers of individual performance metrics.
- ▶ Also allows anonymous comparison to peers within their department.
- ▶ Providers love these!
  - ▶ Objective and standardized review.
  - ▶ Opportunity to improve.



## Using the Excel document

- ▶ Contains all the data included on the report cards.
  - ▶ Stats summary for entire facility.
  - ▶ Stats by location.
  - ▶ Stats by provider.
- ▶ Also contains data from each individual visit with analysis logic and adjudication rationale.
  - ▶ Can filter visit list to give to departments and providers for chart review upon request.

Row	Text	Value	Percentage
1	STATISTICS:		
2			
3	Report start date: 2019-09-11		
4	Report end date: 2019-12-10		
5			
6	Total patients:	12	
7	Total visits:	54	
8	Visits per patient:	4.5	
9			
10	Visits eligible for abx:	30	(55.56%)
11	Visits where any abx given:	23	(42.59%)
12	Visits where guideline abx (doxycycline) given:	16	(29.63% of all visits, 69.57% of visits where abx given)
13	Visits where nonpreferred abx (not doxycycline) given:	7	(12.96% of all visits, 30.43% of visits where abx given)
14			
15	Visits where guideline abx given to comorbid patients:	9	(16.67%)
16	+ Visits where abx not given to non-comorbid patients:	14	(25.93%)
17	+ Visits where abx not given to comorbid patients:	17	(31.48%)
18	= Total visits where abx likely used appropriately:	40	(74.07%)
19			
20	Visits where nonpreferred abx given to comorbid patients:	4	(7.41%)
21	+ Visits where any abx given to non-comorbid patients:	10	(18.52%)
22	= Total visits where abx likely used inappropriately:	14	(25.93%)
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			

Location	Visits eligible for abx	Visits where any abx given	Visits where guideline abx (doxycycline) given	Visits where nonpreferred abx (not doxycycline) given
EMERGENCY DEPT	17 (56.67%, 56.67%, 31.48%)	12 (40.00%, 52.17%, 22.22%)	6 (20.00%, 37.50%, 11.11%)	6 (20.00%, 85.71%, 11.11%)
INTERNAL MED	2 (6.67%, 6.67%, 3.70%)	1 (3.33%, 4.25%, 1.85%)	0 (0.00%, 0.00%, 0.00%)	1 (33.33%, 34.29%, 1.85%)
WALK IN CLINIC	11 (52.38%, 36.67%, 20.37%)	10 (47.62%, 43.48%, 18.52%)	10 (47.62%, 62.50%, 18.52%)	0 (0.00%, 0.00%, 0.00%)
Totals	30 (55.56%, 100.00%, 55.56%)	23 (42.59%, 100.00%, 42.59%)	16 (29.63%, 100.00%, 29.63%)	7 (12.96%, 100.00%, 12.96%)

SMRRT Bronchitis Sample - Excel

Stautfer, Nicholas (HS/NAW)

4 (22.22%, 28.57%, 7.41%)

1 STATISTICS BY PROVIDER:  
 2 Figures are shown as N (% of row, % of column, % of total).

3 Provider Code	Visits eligible for abx	Visits where any abx given	Visits where guideline abx (doxycycline) given	Visits where nonpreferred abx (not doxycycline)
4 1234 9 (50.00%, 30.00%, 16.67%)	9 (50.00%, 39.13%, 16.67%)	8 (44.44%, 50.00%, 14.81%)	1 (5.56%, 14.29%, 1.85%)	
5 5555 5 (45.45%, 16.67%, 9.26%)	6 (54.55%, 26.09%, 11.11%)	3 (27.27%, 18.75%, 5.56%)	3 (27.27%, 42.86%, 5.56%)	
6 5678 9 (64.29%, 30.00%, 16.67%)	6 (42.86%, 26.09%, 11.11%)	4 (28.57%, 25.00%, 7.41%)	2 (14.29%, 28.57%, 3.70%)	
7 9999 7 (63.64%, 23.33%, 12.96%)	2 (18.18%, 8.70%, 3.70%)	1 (9.09%, 6.25%, 1.85%)	1 (9.09%, 14.29%, 1.85%)	
8 Totals	30 (55.56%, 100.00%, 55.56%)	23 (42.59%, 100.00%, 42.59%)	16 (29.63%, 100.00%, 29.63%)	7 (12.96%, 100.00%, 12.96%)

Visits Stats summary Stats by provider Stats by location

SMRRT Bronchitis Sample - Excel

Stautfer, Nicholas (HS/NAW)

A1 Visit date

1 Visit date	2 Chart #	3 Hospital location	4 Provider	5 Provider IEN	6 POV Dx Code	7 Comorbidities?	8 Comorbidities	9 Abx prescribed?	10 Abx prescribed	11 Preferred abx?	12 Likely appropriate?
2 2019-09-18	GIMC 2548	EMERGENCY DEPT	PROVIDER,TEST PA (1234)	1234	J20.9	false		true	AZITHROMYCIN 250MG TABLET 6'S *CLINIC*.	false	false
3 2019-09-18	GIMC 34567	EMERGENCY DEPT	DEMO,DOCTOR (5555)	5555	J20.9	false		true	AZITHROMYCIN 250MG TABLET 6'S *CLINIC*.	false	false
4 2019-09-18	GIMC 66430	WALK IN CLINIC	PROVIDER,TEST PA (1234)	1234	J20.9	false		false		true	true
5 2019-09-20	GIMC 77777	INTERNAL MED	ANOTHER,DOCTOR MD (5678)	5678	J20.9	true	Patient has diagnosis code I50.30.	true	AZITHROMYCIN 250MG TABLET.	false	false
6 2019-09-22	GIMC 2548	EMERGENCY DEPT	TEST,PROVIDER NP (9999)	9999	J20.9	false		false		true	true
7 2019-09-23	GIMC 88841	EMERGENCY DEPT	ANOTHER,DOCTOR MD (5678)	5678	J20.9	false		true	DOXYCYCLINE HYCLATE 100MG TABLET.	true	false
8 2019-09-27	GIMC 33454	EMERGENCY DEPT	TEST,PROVIDER NP (9999)	9999	J20.9	false		false		true	true
9 2019-09-27	GIMC 77777	EMERGENCY DEPT	ANOTHER,DOCTOR MD (5678)	5678	J20.9	true	Patient has diagnosis code I50.30.	true	DOXYCYCLINE HYCLATE 100MG TABLET.	true	true
10 2019-09-27	GIMC 77777	EMERGENCY DEPT	ANOTHER,DOCTOR MD (5678)	5678	J20.9	true	Patient has diagnosis code I50.30.	false		true	true
11 2019-09-29	GIMC 77777	EMERGENCY DEPT	ANOTHER,DOCTOR MD (5678)	5678	J20.9	true	Patient has diagnosis code I50.30.	false		true	true
12 2019-09-29	GIMC 123457	EMERGENCY DEPT	DEMO,DOCTOR (5555)	5555	J20.9	false		true	AZITHROMYCIN 250MG TABLET.	false	false
13 2019-09-29	GIMC 66430	WALK IN CLINIC	DEMO,DOCTOR (5555)	5555	J20.9	false		false		true	true
14 2019-09-29	GIMC 69421	WALK IN CLINIC	PROVIDER,TEST PA (1234)	1234	J20.9	true	Patient has diagnosis code J44.1; Patient has diagnosis code J44.9.	false		true	true
15 2019-09-30	GIMC 77777	EMERGENCY DEPT	DEMO,DOCTOR (5555)	5555	J20.9	true	Patient has diagnosis code I50.30.	false		true	true
16 2019-09-30	GIMC 69421	EMERGENCY DEPT	DEMO,DOCTOR (5555)	5555	J20.9	true	Patient has diagnosis code I50.9; Patient has diagnosis code J44.1; Patient has diagnosis code J44.9.	true	AZITHROMYCIN 250MG TABLET.	false	false
17 2019-10-03	GIMC 88841	EMERGENCY DEPT	DEMO,DOCTOR (5555)	5555	J20.9	false		true	DOXYCYCLINE HYCLATE 100MG TABLET.	true	false
18 2019-10-07	GIMC 69421	WALK IN CLINIC	PROVIDER,TEST PA (1234)	1234	J20.9	true	Patient has diagnosis code I50.9; Patient has diagnosis code J44.1; Patient has diagnosis code J44.9.	false		true	true
19 2019-10-08	GIMC 77777	EMERGENCY DEPT	TEST,PROVIDER NP (9999)	9999	J20.9	true	Patient has diagnosis code I50.30.	false		true	true
20 2019-10-08	GIMC 88841	WALK IN CLINIC	PROVIDER,TEST PA (1234)	1234	J20.9	false		true	DOXYCYCLINE HYCLATE 100MG TABLET.	true	false
21 2019-10-10	GIMC 2548	EMERGENCY DEPT	ANOTHER,DOCTOR MD (5678)	5678	J20.8	false		false		true	true

Visits Stats summary Stats by provider Stats by location

## Developing targeted interventions

- ▶ Use the Excel document to identify which hospital locations and/or providers have a high proportion of visits where antibiotics were likely used appropriately (i.e. given if indicated or withheld if not indicated).
- ▶ Chart review via spreadsheet or EHR if necessary.
- ▶ What specific provider education would be most effective?
- ▶ Is the preferred antibiotic being used?
  - ▶ Did the patient have an allergy that prevented using the preferred agent?
- ▶ Are antibiotics being used in people without comorbidities?
- ▶ Are the correct diagnosis codes being used?

## Finding opportunities for targeted interventions

Location	Visits where any abx given to non-comorbid patients	Total visits where abx likely used inappropriately	Total visits
EMERGENCY DEPT	6 (20.00%, 40.00%, 11.11%)	9 (30.00%, 44.29%, 16.67%)	30 (100.00%, 55.56%, 55.56%)
INTERNAL MED	0 (0.00%, 0.00%, 0.00%)	1 (33.33%, 7.14%, 1.85%)	3 (100.00%, 5.56%, 5.56%)
WALK IN CLINIC	4 (19.05%, 40.00%, 7.41%)	5 (35.71%, 28.57%, 7.41%)	21 (100.00%, 38.89%, 38.89%)
Totals	10 (18.52%, 100.00%, 18.52%)	14 (25.93%, 100.00%, 25.93%)	54 (100.00%, 100.00%, 100.00%)

Provider Code	Visits where any abx given to non-comorbid patients	Total visits where abx likely used inappropriately	Total visits
1234	4 (22.22%, 40.00%, 7.41%)	4 (22.22%, 28.57%, 7.41%)	18 (100.00%, 33.33%, 33.33%)
5678	3 (27.27%, 30.00%, 5.56%)	3 (36.36%, 28.57%, 7.41%)	11 (100.00%, 20.37%, 20.37%)
9999	3 (18.75%, 40.00%, 7.41%)	4 (28.57%, 28.57%, 7.41%)	14 (100.00%, 25.93%, 25.93%)
Totals	10 (18.52%, 100.00%, 18.52%)	14 (25.93%, 100.00%, 25.93%)	43 (100.00%, 20.37%, 20.37%)

## Measuring impact

- ▶ Run the module quarterly or annually to see trends and impact of targeted interventions.
- ▶ Epidemiology: Are bronchitis cases increasing or decreasing?
- ▶ Performance: Is the proportion of cases with appropriate clinical course increasing?
- ▶ Quality improvement: Are departments and/or providers who have received targeted interventions improving?
- ▶ Example from GIMC:
  - ▶ 2020: Only 60% of bronchitis cases used antibiotics appropriately.
  - ▶ Targeted intervention of ER providers.
  - ▶ 2021: Improvement! 90% of bronchitis cases used antibiotics appropriately.

## Review

- ▶ SMRRT enables facilities to perform standardized, objective chart reviews and adjudication in minutes.
- ▶ SMRRT software can be obtained from <https://ihs.verdegraphics.com>
- ▶ SMRRT is easy to set up and use.
- ▶ SMRRT automates RPMS data extraction, analysis, and report generation.
- ▶ SMRRT can be used to generate report cards for providers, departments, and the facility.
- ▶ SMRRT can be used to identify areas for improvement and develop targeted interventions, such as provider-specific education, as well as assess the impact of these interventions.

Questions and discussion.

# Antimicrobial Stewardship Quality Improvement with SMRRT Software

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