



PRIMES: Pediatric Respiratory Illness Measurement System

Using the Excel Abstraction Tool

Medical Record Abstractor Materials

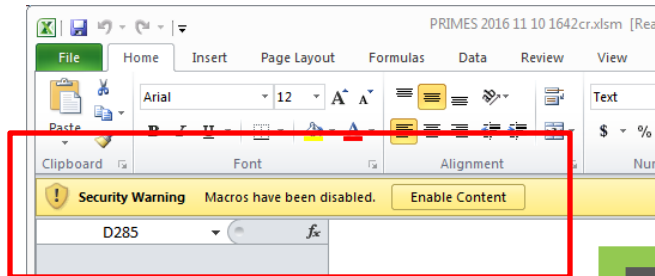
Seattle, WA

February 22, 2019



Getting Started With the PRIMES Abstraction Tool

1. Place a copy of the file PRIMES ABSTRACTION TOOL in the desired directory.
2. Open the file. If you get any warnings or confirmations about running macros, please enable macros for this file. The tool will not work without them. You may need to contact your IT department for assistance.



Enable Content

3. Once macros are enabled, the tool should automatically navigate to the Home Screen.

The PRIMES tool for medical record abstraction was produced by the Center for Child Health, Behavior and Development, part of the Seattle Children's Hospital Research Institute.

HELP ? **GO!** →

ASTHMA

| | |
|---|---|
| <input checked="" type="checkbox"/> New Abstraction | <input type="checkbox"/> Croup |
| <input type="checkbox"/> Continue Last Abstraction | <input checked="" type="checkbox"/> Asthma |
| <input type="checkbox"/> Revise / Continue Abstraction | <input type="checkbox"/> Bronchiolitis |
| <input type="checkbox"/> Save Current Partial Case | <input type="checkbox"/> CAP -- Community Acquired Pneumonia |
| <input type="checkbox"/> View Last Case Data | <input type="checkbox"/> All Conditions |
| <input type="checkbox"/> Scoring | |
| <input type="checkbox"/> Export | |

Abstractor:

Institution:

Last export path:

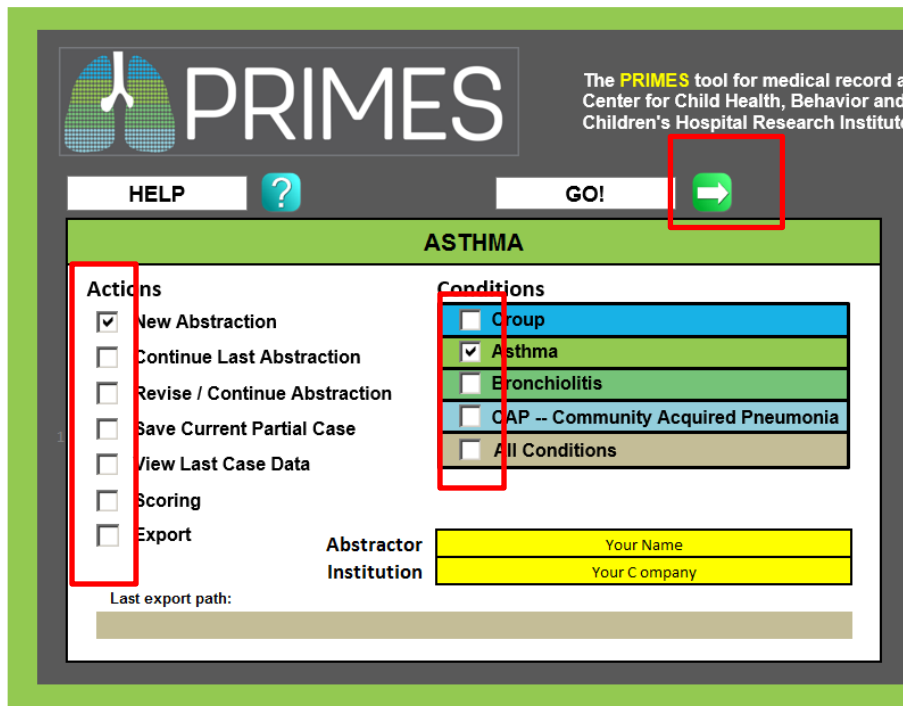
IMPORTANT! Use of the PRIMES tool requires Excel macros to be enabled in this workbook!

To get started, select an action, one of the four conditions, and the GO button.

Navigate through the sheets using the NEXT and PREVIOUS arrows, and the HOME button in the upper left.

Data entry must be in a designated value cell in order to be properly read by the tool. For more details, see the HELP sheet.

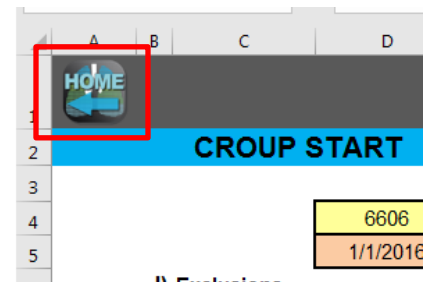
PRIMES Home Screen



Press the GO!
button to take
the selected
action.

Use the boxes on the left to select which action to take.

Use the boxes on the right to select a condition.
"All Conditions" only applies to Scoring and Export Actions.



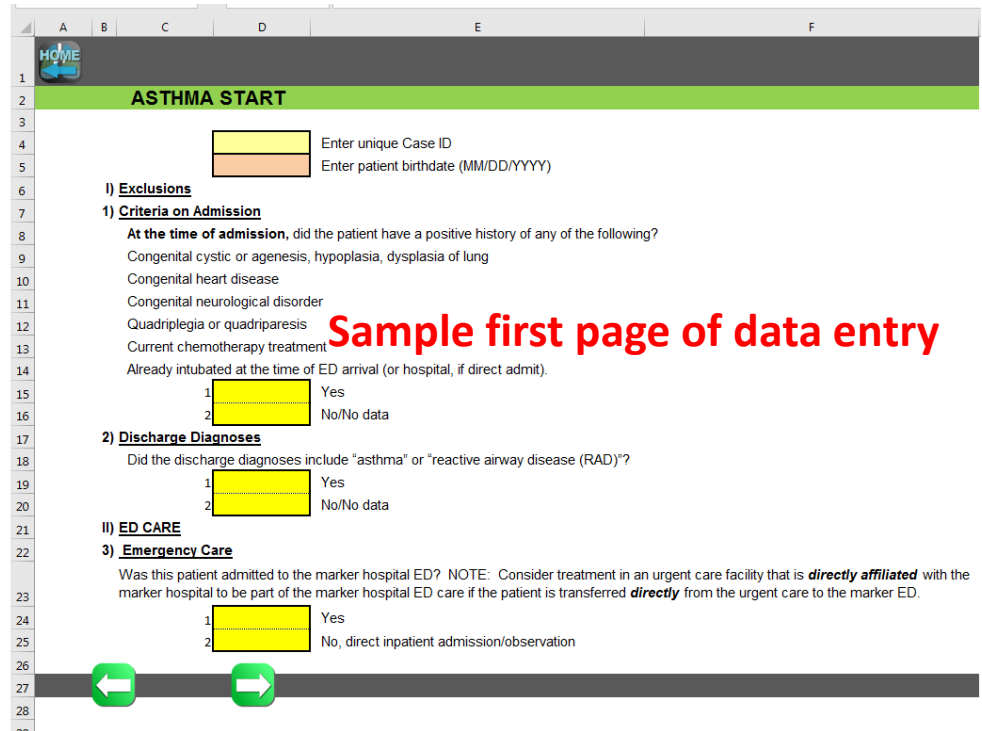
From any sheet, the HOME button in the upper left returns to the Home Screen. The keyboard command Ctrl+H will also return to the Home Screen

New Abstraction

Actions

- New Abstraction**
- Continue Last Abstraction
- Revise / Continue Abstraction
- Save Current Partial Case
- View Last Case Data
- Scoring
- Export

The New Abstraction button clears out all data from any previous case and navigates to the first page of abstraction for that condition.



HOME

1

2 **ASTHMA START**

3

4 Enter unique Case ID

5 Enter patient birthdate (MM/DD/YYYY)

6

7 **I) Exclusions**

8 **1) Criteria on Admission**

9 **At the time of admission**, did the patient have a positive history of any of the following?

10 Congenital cystic or agenesis, hypoplasia, dysplasia of lung

11 Congenital heart disease

12 Congenital neurological disorder

13 Quadriplegia or quadriplegia

14 Current chemotherapy treatment

15 **Sample first page of data entry**

16 Already intubated at the time of ED arrival (or hospital, if direct admit).

17 1 Yes

18 2 No/No data

19 **2) Discharge Diagnoses**

20 Did the discharge diagnoses include "asthma" or "reactive airway disease (RAD)"?

21 1 Yes

22 2 No/No data

23 **II) ED CARE**

24 **3) Emergency Care**

25 Was this patient admitted to the marker hospital ED? NOTE: Consider treatment in an urgent care facility that is **directly affiliated** with the marker hospital to be part of the marker hospital ED care if the patient is transferred **directly** from the urgent care to the marker ED.

26 1 Yes

27 2 No, direct inpatient admission/observation

28

29

Abstraction Tool Data Entry

ASTHMA START

Date Enter patient birthdate (MM/DD/YYYY)

Text Enter unique Case ID

I) Exclusions

1) Criteria on Admission

At the time of admission, did the patient have a positive history of any of the following conditions?

- Congenital cystic or agenesis, hypoplasia, dysplasia of lung
- Congenital heart disease
- Congenital neurological disorder
- Quadriplegia or quadriplegia
- Current chemotherapy treatment

Already intubated at the time of ED arrival (or hospital, if direct admit).

Multiple choice

1 Yes

2 No/No data

ASTHMA ED

II) ED CARE

4) ED Admission and Discharge

Enter the date (MM/DD/YYYY) and time (HHMM 24-hour clock) and the date and time of discharge from the ED.

| | Date | Time | |
|------|-----------|------|----------------------|
| 4.A) | 12/2/2013 | 1200 | Arrival/registration |
| 4.B) | 12/2/2013 | 1205 | Admission |
| 4.C) | 12/2/2013 | 1300 | Discharge |

Time of first clinical note (HHMM 24-hour clock)

4.D)

5) Initial Physical Exam

Data entry must be in a designated value cell in order to be properly read by the tool. The different kinds of cells are formatted differently to provide a guide to what kind of data to enter.

Note: in the case of Multiple Choice or Yes/No questions, it does not matter what kind of character is placed in the cell.

| | TIME (HHMM 24-Hour clock) | AUSC | HR | RR (value between 0 and 100) | SaO2 (value between 0 and 100) |
|---|---------------------------------|---------------|----|------------------------------------|--------------------------------------|
| 1 | 1215 | | | 30 | |
| 2 | | | | | |
| 3 | Time | Yes/No | | Numbers | |
| 4 | | | | | |

Abstraction Tool Navigation and Data Checks

ASTHMA START

Enter unique Case ID
12/12/2012 Enter patient birthdate (MM/DD/YYYY)

I) Exclusions

1) Criteria on Admission

At the time of admission, did the patient have a positive history of any of the following:
 Congenital cystic or agenesis, hypoplasia, dysplasia of lung
 Congenital heart disease
 Congenital neurological disorder
 Quadriplegia or paraparesis
 Current chemotherapy treatment
 Already intubated at the time of ED admission

1 Yes
2 X No/No data

2) Discharge Diagnoses

Did the discharge diagnoses include "asthma" or "reactive airway disease (RAD)"

1 X Yes
2 No/No data

II) ED CARE

3) Emergency Care

Was this patient admitted to the marker hospital ED? NOTE: Consider treatment at the marker hospital to be part of the marker hospital ED care if the patient is transferred

1 X Yes
2 No, direct inpatient admission/observation

← →

Navigate through the tool using the forward/back buttons. When you move forward through the tool, the data is checked for validity. If an invalid cell is found, the cell is outlined in red and you will get a pop-up message indicating the type of problem. Common problems:

- Required value missing
- Invalid Date
- Invalid Time
- More than one multiple choice cell marked
- Invalid data combination (ie, this question should only be answered if a previous question is answered "yes")

Branching Logic

Just as with online surveys you might have used (REDCap, etc.) the Excel PRIMES tool uses branching logic to navigate to different data entry form pages depending on earlier questions.

Calculate & Save

Press the Calculate & Save button to calculate the measure values and write the current case to the Case History sheet. It will also save the Excel workbook.

ASTHMA END Case ID : 698 Admit : 6/5/2018 900 Disch : 6/6/2018 1212

← FINISHED! Press Calculate & Save button to calculate this case and write results to the Excel file

CALCULATE & SAVE

PRIMES Continue/View

Actions

- New Abstraction
- Continue Last Abstraction
- Revise / Continue Abstraction
- Save Current Partial Case
- View Last Case Data
- Scoring
- Export

Continue Last Abstraction returns to the last page of the most recent abstraction for the currently selected condition.

Example:

HOME

ASTHMA ED Case ID : 99999 Arrival : 6/6/2018 1000 Disch : 6/6/2018 2200

11) Initial History

Based on MD and nurses' notes AND in the ED (or the inpatient H&P if the ED admission was ≤ 1 hour), which of the following aspects of history were noted?

| | Yes | No | |
|-------|-----|----|--|
| 11.A) | x | | Time of onset or duration of current symptoms |
| 11.B) | | x | Known triggers of asthma exacerbations OR note that they are not known |
| 11.C) | x | | Estimate of previous asthma-related unscheduled MD/ED visits or hospitalizations in the past year OR note that there were none |
| 11.D) | x | | Presence/absence of prior respiratory insufficiency (loss of consciousness, intubation, or mechanical ventilation) OR note of no prior hospitalizations |
| 11.E) | x | | Presence/absence of other cardiac/pulmonary/immunodeficiency disease |

←
→

PRIMES Revise or Continue Abstraction

Actions

- New Abstraction
- Continue Last Abstraction
- Revise / Continue Abstraction
- Save Current Partial Case
- View Last Case Data
- Scoring
- Export

Input

Enter ID of case to revise or continue:

OK Cancel

Revise or Continue Abstraction pulls in any case saved in this copy of the tool. You will be able to navigate through from the beginning, updating any data that might be necessary.

When you get to the end of the case, press the Calculate & Save button to re-calculate and save using the new data.



ASTHMA END

Case ID : 698 Admit : 6/5/2018 900 Disch : 6/6/2018 1212



FINISHED! Press Calculate & Save button to calculate this case and write results to the Excel file



PRIMES Save Current Partial Case

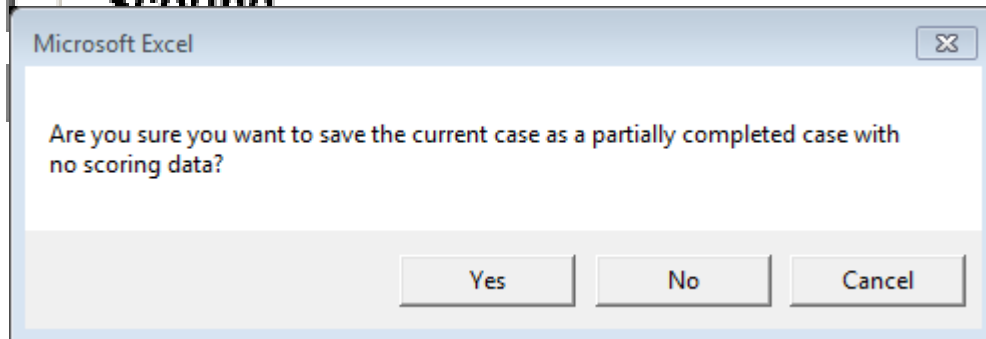
Actions

- New Abstraction
- Continue Last Abstraction
- Revise / Continue Abstraction
- Save Current Partial Case
- View Last Case Data
- Scoring

Save Current Partial Case Saves the current case as a Partial Case with no scoring data. This option is generally used if you are unable to complete a particular abstraction at this time and want to move on to abstracting a different case.

Important!

If you save the current case as a partial case, if a completed case with the same Case ID exists, it will overwrite that case!



PRIMES View Last Case Data

Actions

- New Abstraction
- Continue Last Abstraction
- Revise / Continue Abstraction
- Save Current Partial Case
- View Last Case Data**
- Scoring
- Export

Abstructor

View Last Case Data Takes you to the final Case Sheet for the most recently completed case.

| HOME | | Asthma Case Sheet |
|-----------|-----------------------------|-------------------|
| CASE ID | ACASEID 99999 | |
| Birthdate | APatient_Birthdate 5/5/2015 | |
| 1 | ACriteria 2 | |
| 2 | ADischargeDiagnosis 1 | |
| 3 | AEmergencyCare 1 | |
| 4ai | AED_Arive_date 6/6/2018 | |
| 4aii | AED_Arive_time 1000 | |
| 4bi | AED_Admit_date 6/6/2018 | |
| 4bii | AED_Admit_time 1010 | |
| 4ci | AED_Disch_Date 6/6/2018 | |
| 4cii | AED_Disch_Time 2200 | |
| 4D | AED_Note_time 1010 | |
| 5a | AED_Exam_alertness 1 | |
| 5b | AED_Exam_dehydration 2 | |
| 5c | AED_Exam_wheezing 1 | |
| 5d | AED_Exam_retractions 2 | |
| 5e | AED_Exam_aeration 1 | |
| 6 a | AED_NoSABA 1 | |
| 7 a | AED_SysCort_outside 2 | |
| 7 b | AED_SysCort_during 2 | |


PRIMES Scoring

Actions

- New Abstraction
- Continue Last Abstraction
- Revise / Continue Abstraction
- Save Current Partial Case
- View Last Case Data
- Scoring
- Export

Abstractor
Institution

Scoring Takes you to the Calculation Results sheet for the selected condition. This sheet has a record of all the cases abstracted in the tool, Measure Calculations only.

| HOME ? | | Calculation results - CAP - Community Acquired Pneumonia PRIMES | | | | | Score Sheet  | |
|------------------|--------------------------|---|--------|----------------|-------------|----------------|---|-----|
| Selection method | | | | | | | 1. Choose one selection method or less to consider ALL cases 2. Score Sheet button to see results. | |
| 1 | <input type="checkbox"/> | Select by Discharge Date | | to | | | | |
| 2 | <input type="checkbox"/> | Direct Select | | | | | | |
| | Select | Discharge Date | CASEID | PNE_2_Eligible | PNE_2_Score | PNE_5_Eligible | PNE_5_Score | PNE |
| | <input type="checkbox"/> | 11/15/2018 | 1804 | 1 | 1 | | | |
| | <input type="checkbox"/> | 11/18/2018 | 5501 | 1 | 0.5 | 1 | 1 | |
| | <input type="checkbox"/> | | 5502 | | | | | |
| | <input type="checkbox"/> | 11/15/2018 | 5503 | 1 | 0.6 | | | |
| | <input type="checkbox"/> | 11/15/2018 | 5504 | 1 | 0.75 | | | |

Selection Method 1 – select by discharge date, requires two dates to be entered.

Selection Method 2 – Direct Select, place a mark in the yellow box next to each case you want to see.

Selection Method 3– leave the Selection Method box empty to select all cases on the sheet.

After you've made a selection, click the Score Sheet Button in the upper right.

PRIMES Score Sheet

| Scoring results - CAP - Community Acquired Pneumonia | | |
|--|-------------|-------|
| Using direct select of cases. | | |
| | Sample Size | Score |
| Pne #2: History Children hospitalized with pneumonia, Should have the following history items documented: - P/A prior hospitalizations - Immunization status - P/A recent TB exposure - P/A recent travel - P/A recent antibiotic use | 4 | 0.71 |
| Pne #5: Tests (21-60 days) Infants 21-60 days old diagnosed with pneumonia and admitted to the hospital and treated with antibiotics, Should have all the following tests performed: - Blood culture - Urine culture - CBC with differential - Chest radiograph | 1 | 1 |
| Pne #8: Blood cultures (>60 days) Children >60 days old hospitalized with pneumonia, Should NOT have blood cultures obtained | 1 | 1 |
| Pne #10: PPD Children hospitalized with pneumonia who have a history of exposure to TB or personal/family travel to a TB-prevalent area, Should have a PPD skin test performed | 1 | 1 |
| Pne #12: Chest PT Children hospitalized with pneumonia, Should NOT be treated with chest PT | 4 | 1 |
| Pne #18: Follow-up All children admitted to the hospital for pneumonia and discharged home, Should have parental instruction to contact the child's PCP (or the hospital care physician) within 1 week of discharge or given a referral if they lack a PCP | 4 | 0.5 |



Change parameters



Paste in new file

The Score Sheet displays each measure and gives a brief explanation of what it takes to be eligible and how it is scored. The Sample Size column shows how many cases in the selection were eligible for the measure. Score is the average of the scores from all eligible cases divided by the Sample Size. Change Parameters returns to the Calculation Results sheet, where you can select a different group of cases.



PRIMES Score Sheet – New File

The new file can be saved or otherwise modified without affecting the original file.

| Case | Sample Size | Score |
|---|-------------|-------|
| Pne #2 History Children hospitalized with pneumonia, Should have the following history items documented: - P/A prior hospitalizations - Immunization status - P/A recent TB exposure - P/A recent travel - P/A recent antibiotic use | 4 | 0.71 |
| Pne #5: Tests (21-60 days) Infants 21-60 days old diagnosed with pneumonia and admitted to the hospital and treated with antibiotics, Should have all the following tests performed: - Blood culture - Urine culture - CBC with differential - Chest radiograph | 1 | 1 |
| Pne #8: Blood cultures (>60 days) Children >60 days old hospitalized with pneumonia, Should NOT have blood cultures obtained | 1 | 1 |
| Pne #10: PPD Children hospitalized with pneumonia who have a history of exposure to TB or personal/family travel to a TB-prevalent area, Should have a PPD skin test performed | 1 | 1 |
| Pne #12: Chest PT Children hospitalized with pneumonia, Should NOT be treated with chest PT | 4 | 1 |
| Pne #18: Follow-up All children admitted to the hospital for pneumonia and discharged home, Should have parental instruction to contact the child's PCP (or the hospital care physician) within 1 week of discharge or given a referral if they lack a PCP | 4 | 0.5 |

PRIMES Export

Actions

- New Abstraction
- Continue Last Abstraction
- Revise / Continue Abstraction
- Save Current Partial Case
- View Last Case Data
- Scoring
- Export

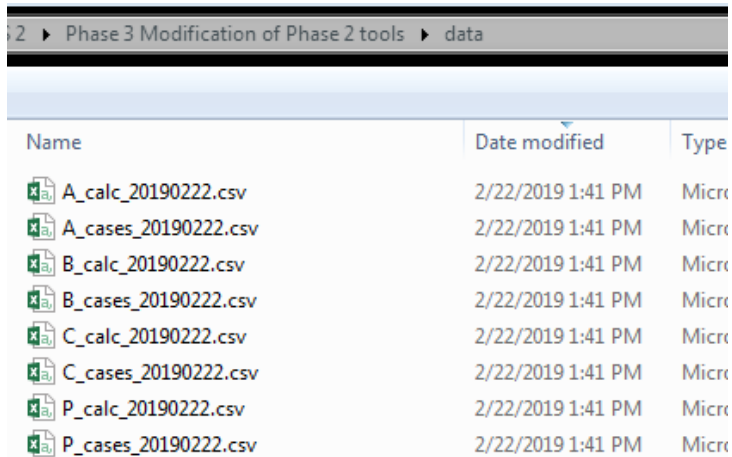
The Export command exports all the cases and scoring data saved in this copy of the tool as CSV files. The default location for the files is a “data” folder under whatever folder the Primes Abstraction Tool Excel Workbook is saved in.

Export path

Exporting data to:

Q:\Rita Mangione Smith\PRIMES 2\Phase 3 Mod

OK Cancel

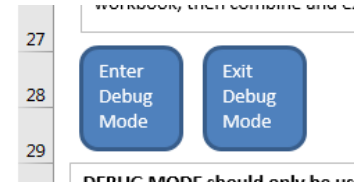


| Name | Date modified | Type |
|----------------------|-------------------|------|
| A_calc_20190222.csv | 2/22/2019 1:41 PM | Micr |
| A_cases_20190222.csv | 2/22/2019 1:41 PM | Micr |
| B_calc_20190222.csv | 2/22/2019 1:41 PM | Micr |
| B_cases_20190222.csv | 2/22/2019 1:41 PM | Micr |
| C_calc_20190222.csv | 2/22/2019 1:41 PM | Micr |
| C_cases_20190222.csv | 2/22/2019 1:41 PM | Micr |
| P_calc_20190222.csv | 2/22/2019 1:41 PM | Micr |
| P_cases_20190222.csv | 2/22/2019 1:41 PM | Micr |

PRIMES Appendix 1: Debug Mode



The Primes Home sheet has a link to a Help Sheet that displays some of the same information in this document. It also has two buttons: Enter Debug Mode and Exit Debug Mode



DEBUG MODE should only be used for technical support by those familiar with Excel. It will unlock the sheets and reveal all sheet tabs. We do not recommend running real abstractions while in debug mode.

