H1 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H1 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	3969.71341	DFE	68
MSE	58.37814	Root MSE	7.64056
SBC	510.138194	AIC	501.031529
MAE	5.17475638	AICC	501.628544
MAPE	1.03326938	HQC	504.656919
Durbin-Watson	0.2202	Total R-Square	0.8362

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	546.3325	2.2301	244.98	<.0001
PRESLOPE	1	-0.9793	0.0529	-18.50	<.0001
INTERVENTION	1	21.6235	5.8677	3.69	0.0005
POSTSLOPE	1	2.0819	0.9864	2.11	0.0385

Estimates of Autocorrelations

Lag	Covariance	Correlation	-1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1
0	55.1349	1.000000	| |********************|
1	48.7978	0.885061	| |****************** |

Preliminary MSE	11.9459

Estimates of Autoregressive Parameters

Lag	Coefficient	Standard Error	t Value
1	-0.885061	0.056867	-15.56

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.8851

Coefficients for First NLAG Observations

	1
1	0.4654747404

Algorithm converged.

H1 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	293.365611	DFE	67
MSE	4.37859	Root MSE	2.09251
SBC	329.936225	AIC	318.552894
MAE	1.51227528	AICC	319.461985
MAPE	0.29954054	HQC	323.084632
Log Likelihood	-154.27645	Transformed Regression R-Square	0.1616
Durbin-Watson	0.7858	Total R-Square	0.9879
		Observations	72

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	535.8279	11.1300	48.14	<.0001
PRESLOPE	1	-0.5653	0.2440	-2.32	0.0236
INTERVENTION	1	-1.8128	2.2441	-0.81	0.4220
POSTSLOPE	1	1.8545	0.7771	2.39	0.0198
AR1	1	-0.9768	0.0277	-35.28	<.0001

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.9768

Coefficients for First NLAG Observations

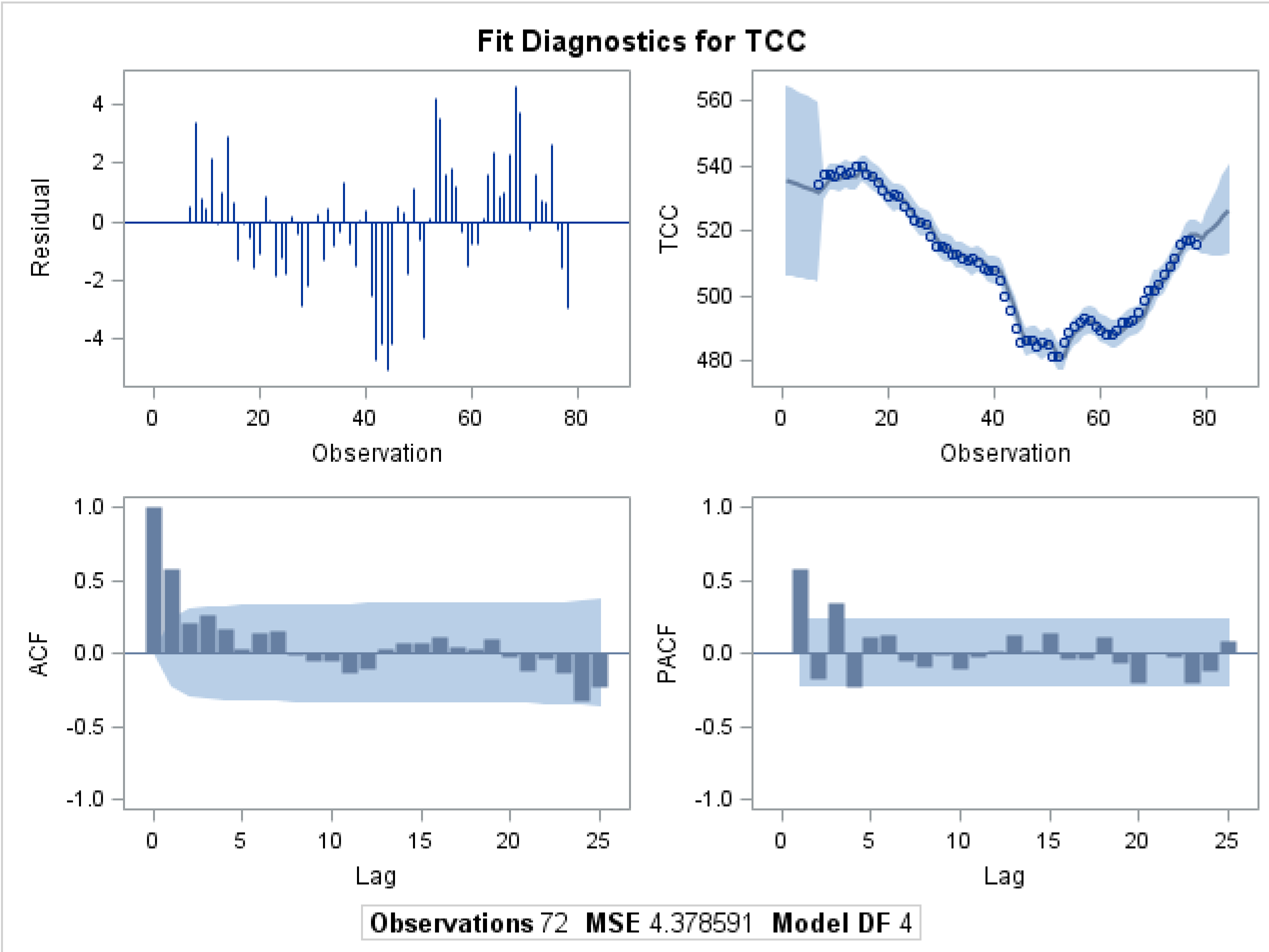
	1
1	0.2140071786

Autoregressive parameters assumed given

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	535.8279	10.4993	51.03	<.0001
PRESLOPE	1	-0.5653	0.1949	-2.90	0.0050
INTERVENTION	1	-1.8128	2.2440	-0.81	0.4220
POSTSLOPE	1	1.8545	0.7136	2.60	0.0115

H1 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure



H2 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H2 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	729.126989	DFE	68
MSE	10.72246	Root MSE	3.27452
SBC	388.126902	AIC	379.020238
MAE	2.43266359	AICC	379.617253
MAPE	2.56145726	HQC	382.645628
Durbin-Watson	0.4834	Total R-Square	0.8699

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	97.7601	0.9557	102.29	<.0001
PRESLOPE	1	-0.1369	0.0227	-6.04	<.0001
INTERVENTION	1	14.4784	2.5147	5.76	<.0001
POSTSLOPE	1	2.5188	0.4227	5.96	<.0001

<table>
<tr><th colspan="4">Estimates of Autocorrelations</th></tr>
<tr><th>Lag</th><th>Covariance</th><th>Correlation</th><th>-1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1</th></tr>
<tr><td>0</td><td>10.1268</td><td>1.000000</td><td>| |********************|</td></tr>
<tr><td>1</td><td>7.5498</td><td>0.745533</td><td>| |*************** |</td></tr>
<tr><td>2</td><td>4.7107</td><td>0.465173</td><td>| |********* |</td></tr>
<tr><td>3</td><td>2.4463</td><td>0.241563</td><td>| |***** |</td></tr>
<tr><td>4</td><td>1.0714</td><td>0.105802</td><td>| |** |</td></tr>
<tr><td>5</td><td>0.6220</td><td>0.061425</td><td>| |* |</td></tr>
<tr><td>6</td><td>0.7619</td><td>0.075239</td><td>| |** |</td></tr>
<tr><td>7</td><td>0.6443</td><td>0.063622</td><td>| |* |</td></tr>
<tr><td>8</td><td>-0.3297</td><td>-0.032559</td><td>| *| |</td></tr>
<tr><td>9</td><td>-1.9353</td><td>-0.191109</td><td>| ****| |</td></tr>
</table>

Preliminary MSE	4.2159

Estimates of Autoregressive Parameters

Lag	Coefficient	Standard Error	t Value
1	-0.740095	0.079464	-9.31
9	0.167012	0.079464	2.10

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.7689
2	0.5790
3	0.4201
4	0.2838

Expected Autocorrelations	
Lag	**Autocorr**
5	0.1626
6	0.0502
7	-0.0596
8	-0.1725
9	-0.2947

Coefficients for First NLAG Observations

	1	2	3	4	5	6	7	8	9
1	0.6178384727	0	0	0	0	0	0	0	0
2	-0.74301545	0.9663313809	0	0	0	0	0	0	0
3	0.0288632131	-0.765539838	0.9667623404	0	0	0	0	0	0
4	0.0364758569	-4.08551E-16	-0.764995529	0.9674502111	0	0	0	0	0
5	0.0461816531	4.020917E-17	-3.53098E-16	-0.764125429	0.9685518345	0	0	0	0
6	0.0586438276	1.720579E-16	-1.12977E-16	-4.02243E-16	-0.762728605	0.970325592	0	0	0
7	0.0748268141	-2.08874E-17	9.361752E-17	-3.28457E-17	-2.77822E-16	-0.760470793	0.9732064563	0	0
8	0.0962259671	4.044571E-17	-4.15071E-17	7.959181E-17	-5.2588E-17	-3.2127E-16	-0.756780533	0.977952066	0
9	0.1253658742	8.848186E-17	-2.66176E-17	-1.50342E-17	6.604467E-17	1.981162E-17	-4.52657E-16	-0.750637954	0.9859547889

Algorithm converged.

H2 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	77.0501789	DFE	66
MSE	1.16743	Root MSE	1.08048
SBC	240.215696	AIC	226.555699
MAE	0.838335	AICC	227.848007
MAPE	0.87344347	HQC	231.993784
Log Likelihood	-107.27785	Transformed Regression R-Square	0.2146
Durbin-Watson	0.7360	Total R-Square	0.9863
		Observations	72

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	93.1784	3.3003	28.23	<.0001
PRESLOPE	1	0.006072	0.0904	0.07	0.9467
INTERVENTION	1	-1.3631	1.2091	-1.13	0.2637
POSTSLOPE	1	1.8309	1.0115	1.81	0.0748
AR1	1	-1.0185	0.0398	-25.58	<.0001
AR9	1	0.1540	0.0329	4.68	<.0001

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9763
2	0.9301
3	0.8627
4	0.7754
5	0.6704
6	0.5500
7	0.4170
8	0.2744
9	0.1255

Coefficients for First NLAG Observations									
	1	2	3	4	5	6	7	8	9
1	0.1580570726	0	0	0	0	0	0	0	0
2	-0.712515067	0.7298354327	0	0	0	0	0	0	0
3	0.4096217489	-1.216967516	0.836928752	0	0	0	0	0	0
4	0.2991594722	3.648196E-15	-1.145958096	0.8887891346	0	0	0	0	0
5	0.2403586925	-3.60253E-15	1.773777E-15	-1.106220398	0.9207162575	0	0	0	0
6	0.2049488309	1.017946E-14	-2.13833E-15	-6.50319E-16	-1.079792233	0.9432510006	0	0	0
7	0.1823474761	-6.60561E-15	8.558777E-15	-3.26031E-15	1.756049E-15	-1.060163782	0.9607148652	0	0

Coefficients for First NLAG Observations

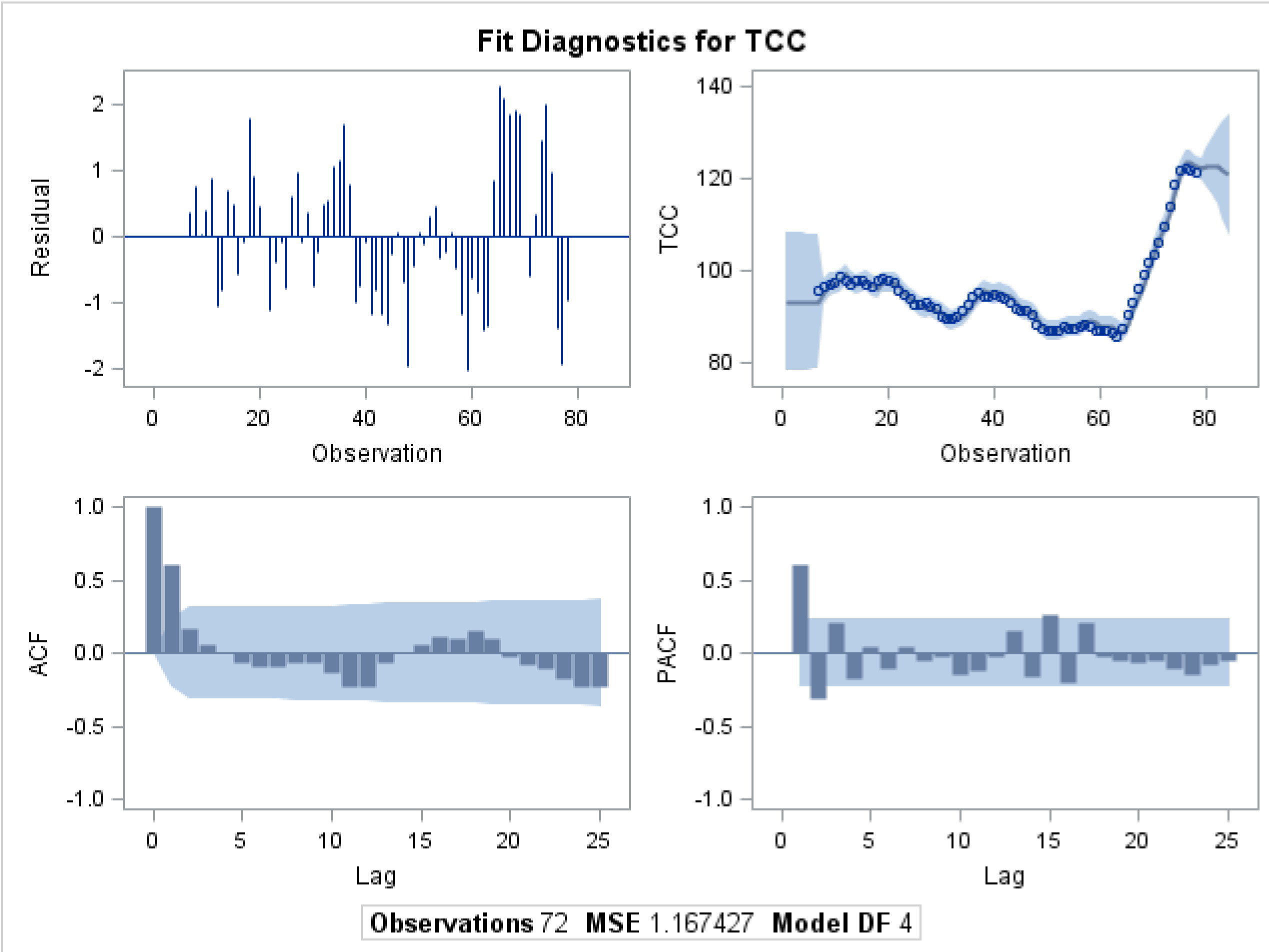
	1	2	3	4	5	6	7	8	9
8	0.1677421786	-8.12206E-16	-3.27074E-15	6.383808E-15	-8.80561E-17	-6.56836E-16	-1.044364228	0.9752489378	0
9	0.1587015603	-5.23362E-16	6.142253E-16	-3.83488E-15	8.334128E-15	-2.44501E-15	6.721183E-16	-1.030805124	0.9880772621

Autoregressive parameters assumed given

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	93.1784	2.6129	35.66	<.0001
PRESLOPE	1	0.006072	0.0629	0.10	0.9234
INTERVENTION	1	-1.3631	1.1368	-1.20	0.2348
POSTSLOPE	1	1.8309	0.5024	3.64	0.0005

H2 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure



H3 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H3 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	114.016456	DFE	68
MSE	1.67671	Root MSE	1.29488
SBC	254.530534	AIC	245.423869
MAE	1.06482806	AICC	246.020884
MAPE	5.1101748	HQC	249.049259
Durbin-Watson	0.1131	Total R-Square	0.9495

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	12.1523	0.3779	32.15	<.0001
PRESLOPE	1	0.2682	0.008971	29.90	<.0001
INTERVENTION	1	-1.1929	0.9944	-1.20	0.2345
POSTSLOPE	1	0.3722	0.1672	2.23	0.0293

Estimates of Autocorrelations

Lag	Covariance	Correlation	-1 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 1
0	1.5836	1.000000	| |********************|
1	1.4389	0.908617	| |****************** |

Preliminary MSE	0.2762

Estimates of Autoregressive Parameters

Lag	Coefficient	Standard Error	t Value
1	-0.908617	0.051022	-17.81

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.9086

Coefficients for First NLAG Observations

	1
1	0.4176294045

Algorithm converged.

H3 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	11.7671063	DFE	67
MSE	0.17563	Root MSE	0.41908
SBC	97.7619383	AIC	86.3786077
MAE	0.32569642	AICC	87.2876986
MAPE	1.48058795	HQC	90.9103454
Log Likelihood	-38.189304	Transformed Regression R-Square	0.6047
Durbin-Watson	1.2247	Total R-Square	0.9948
		Observations	72

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	10.7139	1.5627	6.86	<.0001
PRESLOPE	1	0.2866	0.0343	8.36	<.0001
INTERVENTION	1	-0.1443	0.4553	-0.32	0.7523
POSTSLOPE	1	0.2327	0.1394	1.67	0.0997
AR1	1	-0.9567	0.0352	-27.16	<.0001

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.9567

Coefficients for First NLAG Observations

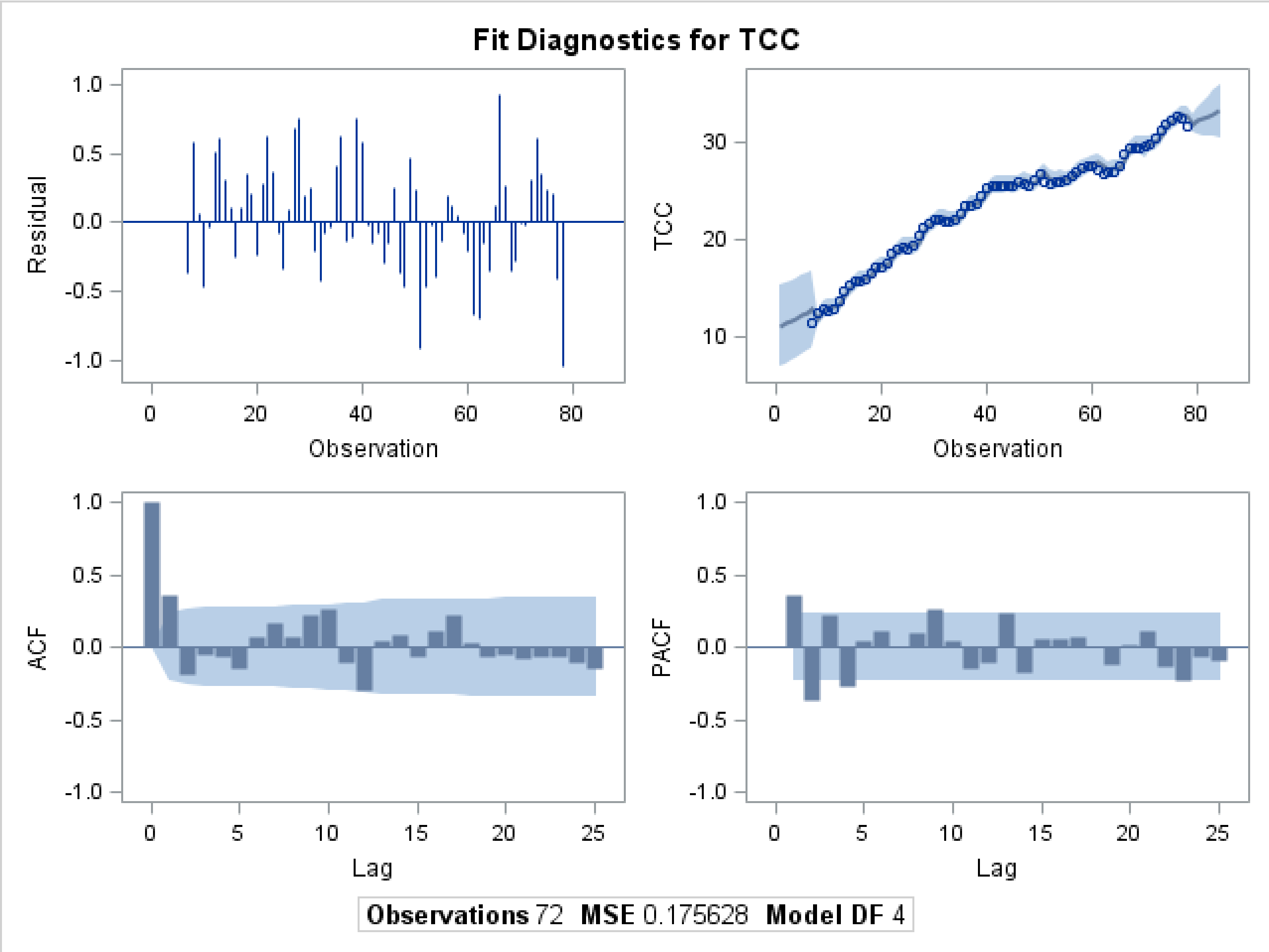
	1
1	0.2909452049

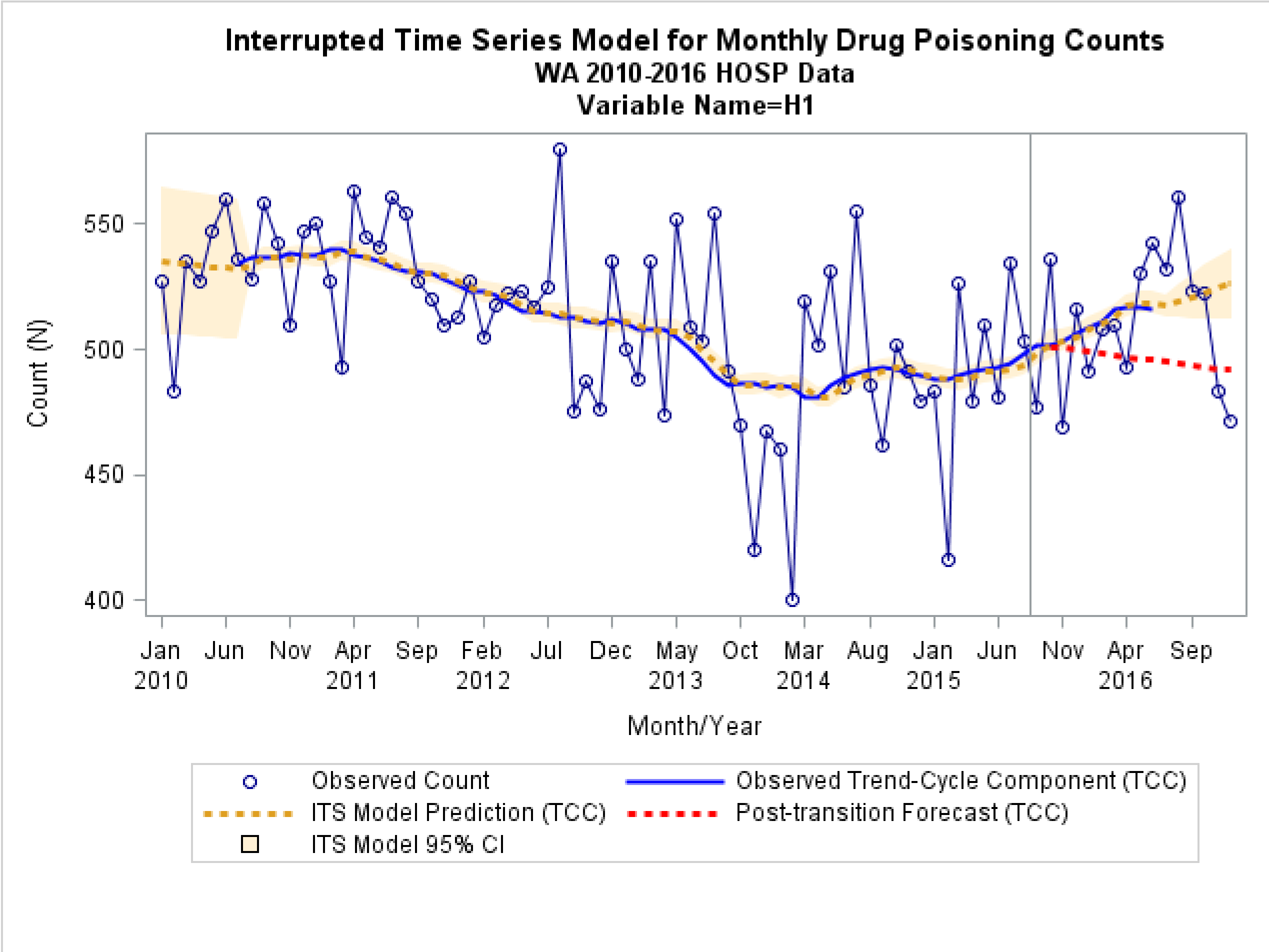
Autoregressive parameters assumed given

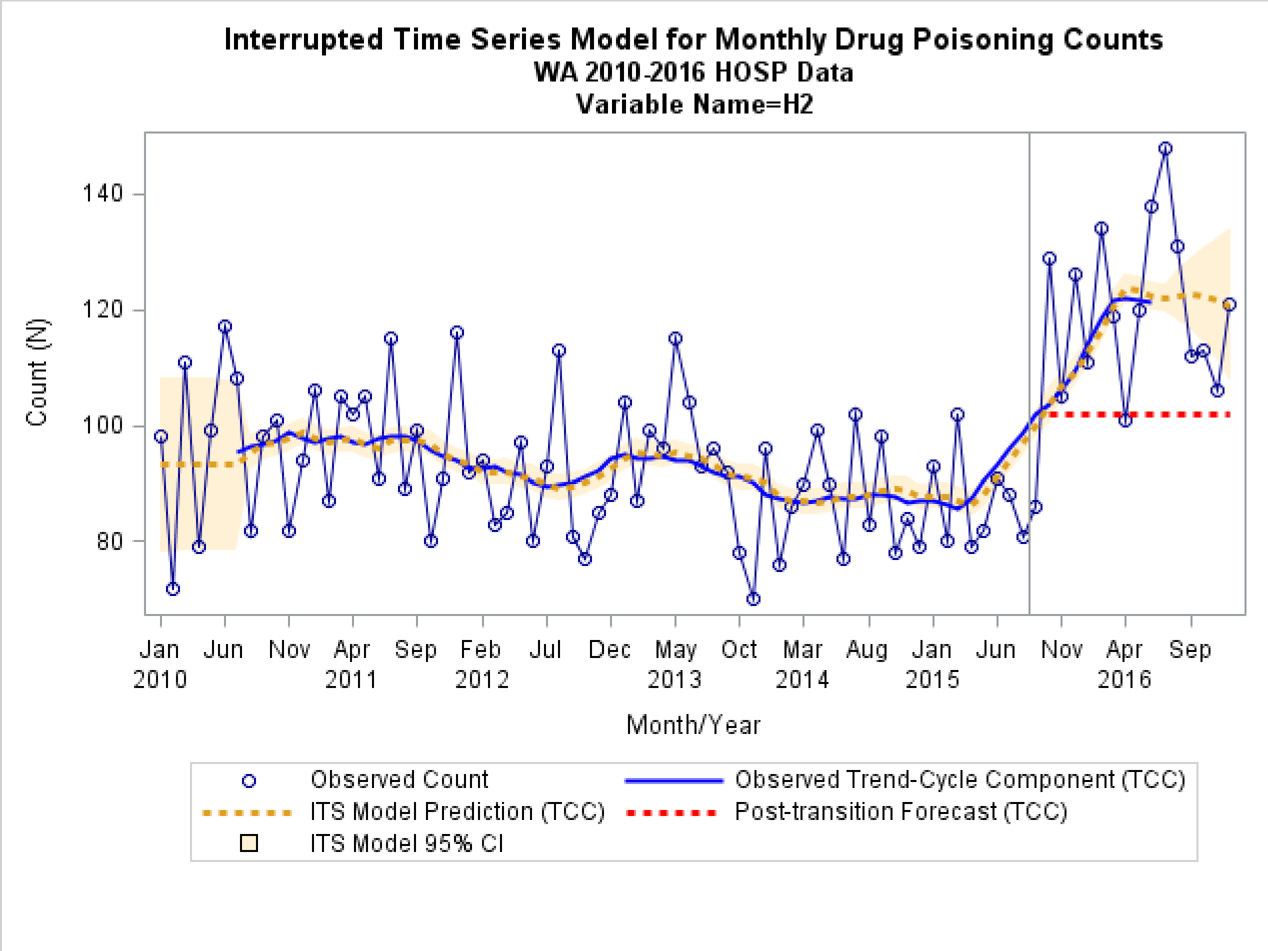
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	10.7139	1.5169	7.06	<.0001
PRESLOPE	1	0.2866	0.0314	9.12	<.0001
INTERVENTION	1	-0.1443	0.4533	-0.32	0.7513
POSTSLOPE	1	0.2327	0.1378	1.69	0.0961

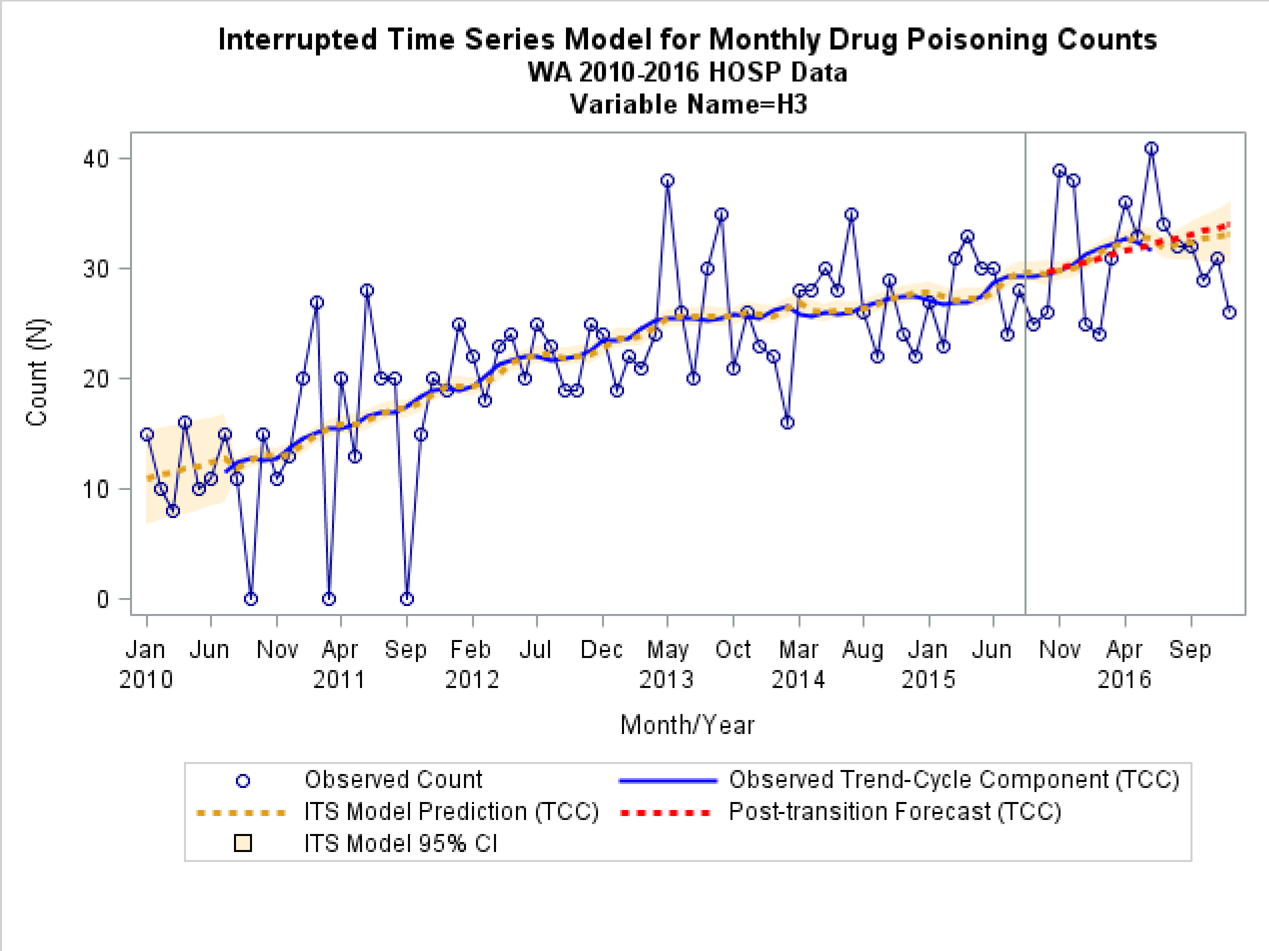
H3 INTERRUPTED TIME SERIES MODEL
WA 2010-2016 HOSP Data

The AUTOREG Procedure




Interrupted Time Series Model for Monthly Drug Poisoning Counts
WA 2010-2016 HOSP Data
Variable Name=H1
Count (N)
550
500
450
400
Jan 2010
Jun
Nov
Apr 2011
Sep
Feb 2012
Jul
Dec
May 2013
Oct
Mar 2014
Aug
Jan 2015
Jun
Nov
Apr 2016
Sep
Month/Year
Observed Count
Observed Trend-Cycle Component (TCC)
ITS Model Prediction (TCC)
Post-transition Forecast (TCC)
ITS Model 95% CI


Interrupted Time Series Model for Monthly Drug Poisoning Counts
WA 2010-2016 HOSP Data
Variable Name=H2
Count (N)
140
120
100
80
Jan 2010
Jun
Nov
Apr 2011
Sep
Feb 2012
Jul
Dec
May 2013
Oct
Mar 2014
Aug
Jan 2015
Jun
Nov
Apr 2016
Sep
Month/Year
Observed Count
Observed Trend-Cycle Component (TCC)
ITS Model Prediction (TCC)
Post-transition Forecast (TCC)
ITS Model 95% CI


Interrupted Time Series Model for Monthly Drug Poisoning Counts
WA 2010-2016 HOSP Data
Variable Name=H3
Count (N)
0
10
20
30
40
Jan 2010
Jun
Nov
Apr 2011
Sep
Feb 2012
Jul
Dec
May 2013
Oct
Mar 2014
Aug
Jan 2015
Jun
Nov
Apr 2016
Sep
Month/Year
Observed Count
Observed Trend-Cycle Component (TCC)
ITS Model Prediction (TCC)
Post-transition Forecast (TCC)
ITS Model 95% CI