H1 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H1 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	97276.5323	DFE	68
MSE	1431	Root MSE	37.82244
SBC	740.456392	AIC	731.349728
MAE	31.3970545	AICC	731.946743
MAPE	1.84540182	HQC	734.975118
Durbin-Watson	0.0786	Total R-Square	0.8704

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	1839	11.0393	166.59	<.0001
PRESLOPE	1	-3.6003	0.2620	-13.74	<.0001
INTERVENTION	1	-58.3569	29.0466	-2.01	0.0485
POSTSLOPE	1	-9.7819	4.8829	-2.00	0.0491

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	1351.1	1.000000	|********************|
1	1250.4	0.925472	|******************* |
2	1109.3	0.821037	|**************** |
3	954.2	0.706271	|************** |
4	806.6	0.597013	|********** |
5	669.8	0.495787	|********** |
6	544.0	0.402644	|******** |
7	411.0	0.304193	|****** |
8	263.3	0.194900	|**** |
9	112.7	0.083409	|** |

Preliminary MSE	180.7

Estimates of Autoregressive Parameters			
Lag	Coefficient	Standard Error	t Value
1	-0.945116	0.045893	-20.59
9	0.100794	0.045893	2.20

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9226
2	0.8381
3	0.7474
4	0.6509

Expected Autocorrelations	
Lag	Autocorr
5	0.5496
6	0.4441
7	0.3353
8	0.2239
9	0.1108

Coefficients for First NLAG Observations									
	1	2	3	4	5	6	7	8	9
1	0.3731607482	0	0	0	0	0	0	0	0
2	-0.892154801	0.9670517736	0	0	0	0	0	0	0
3	0.0845896974	-0.9735997	0.9707443276	0	0	0	0	0	0
4	0.0846617626	1.288322E-15	-0.969918017	0.9744291476	0	0	0	0	0
5	0.0853814155	-1.42854E-15	1.105545E-15	-0.966215993	0.9781626398	0	0	0	0
6	0.0867765722	8.41757E-16	-1.07446E-15	8.368472E-16	-0.962436159	0.9820042379	0	0	0
7	0.0889030015	-2.60624E-16	8.79128E-16	-1.45045E-15	1.396922E-15	-0.958516138	0.9860203177	0	0
8	0.0918499638	2.718603E-16	1.673925E-16	4.458006E-16	-9.74491E-16	7.225823E-16	-0.954384326	0.9902890905	0
9	0.095749895	-6.91184E-16	8.973357E-16	-4.33035E-16	7.44981E-16	-1.11637E-15	1.112066E-15	-0.949954223	0.9949072948

Algorithm converged.

H1 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	4275.25651	DFE	66
MSE	64.77661	Root MSE	8.04839
SBC	527.560401	AIC	513.900404
MAE	6.22005335	AICC	515.192712
MAPE	0.37635565	HQC	519.33849
Log Likelihood	-250.9502	Transformed Regression R-Square	0.5145
Durbin-Watson	0.8097	Total R-Square	0.9943
		Observations	72

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	1826	26.3220	69.36	<.0001
PRESLOPE	1	-3.4463	0.6213	-5.55	<.0001
INTERVENTION	1	-8.8303	8.4844	-1.04	0.3018
POSTSLOPE	1	-9.9803	3.9387	-2.53	0.0137
AR1	1	-1.0216	0.0264	-38.66	<.0001
AR9	1	0.1084	0.0244	4.45	<.0001

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9690
2	0.9272
3	0.8752
4	0.8135
5	0.7429
6	0.6640
7	0.5778
8	0.4852
9	0.3872

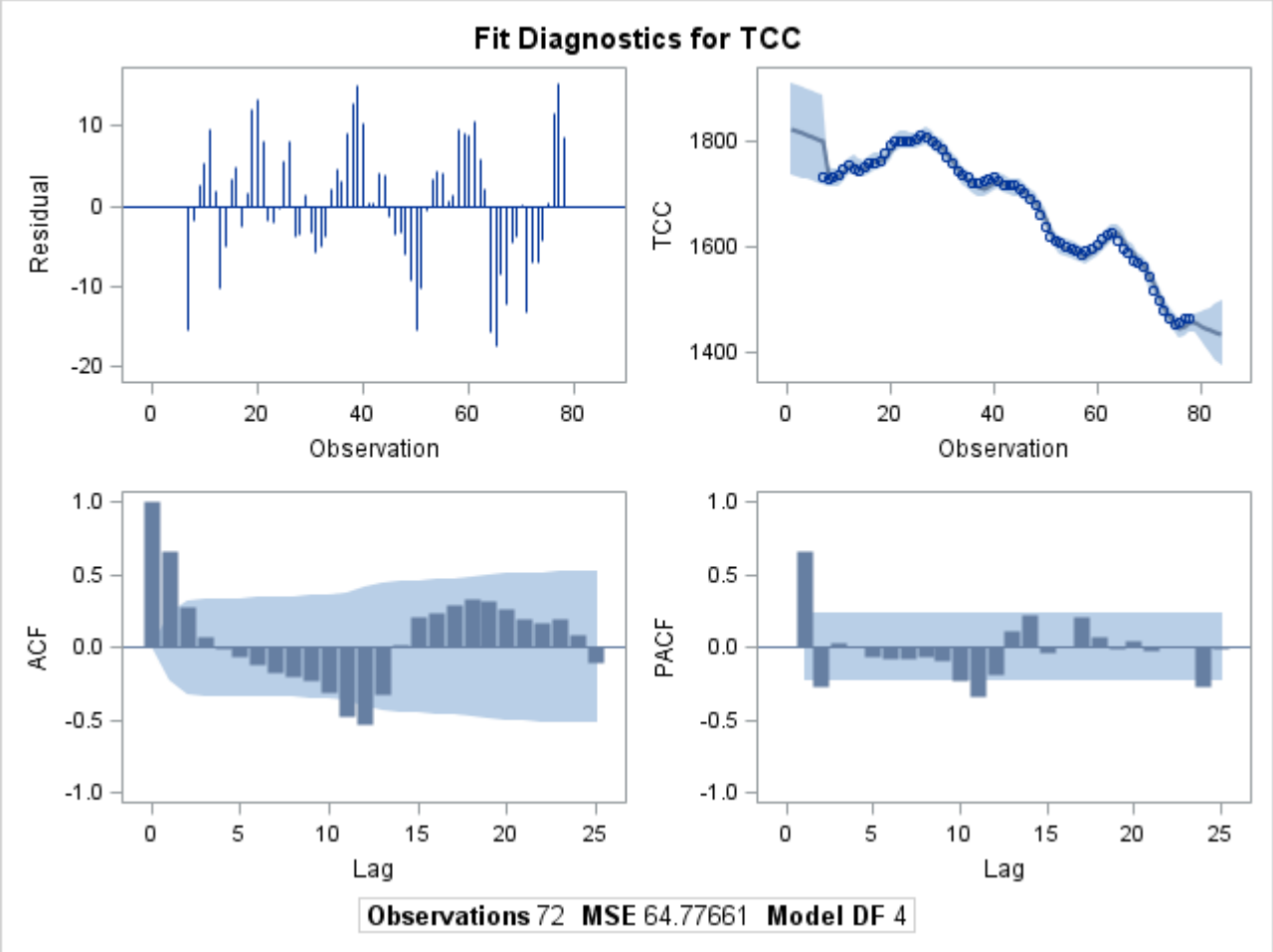
Coefficients for First NLAG Observations									
	1	2	3	4	5	6	7	8	9
1	0.2283143699	0	0	0	0	0	0	0	0
2	-0.894859478	0.9235263592	0	0	0	0	0	0	0
3	0.1797213791	-1.085789111	0.9408510564	0	0	0	0	0	0
4	0.1579091925	-1.95397E-15	-1.070811944	0.9540104944	0	0	0	0	0
5	0.1422399668	-4.1752E-17	-1.57243E-15	-1.059104766	0.9645559764	0	0	0	0
6	0.1307261902	1.224366E-15	2.194132E-16	-2.60847E-15	-1.049509741	0.9733743208	0	0	0
7	0.1221944462	-1.94266E-15	1.717746E-15	-3.60159E-16	-2.02343E-15	-1.041336334	0.9810142971	0	0

Coefficients for First NLAG Observations									
	1	2	3	4	5	6	7	8	9
8	0.1159168542	1.960078E-15	-8.77892E-16	1.805363E-15	-3.00772E-16	-2.62174E-15	-1.034142098	0.9878389383	0
9	0.1114289561	-3.25488E-16	1.978952E-15	-1.45857E-15	1.47501E-15	-8.95191E-17	-1.78076E-15	-1.02762501	0.9941037071

Autoregressive parameters assumed given					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	1826	26.2398	69.58	<.0001
PRESLOPE	1	-3.4463	0.6192	-5.57	<.0001
INTERVENTION	1	-8.8303	8.4524	-1.04	0.3000
POSTSLOPE	1	-9.9803	3.6255	-2.75	0.0076

H1 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure



H2 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H2 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	3779.008	DFE	68
MSE	55.57365	Root MSE	7.45477
SBC	506.593464	AIC	497.486799
MAE	5.70881835	AICC	498.083814
MAPE	2.70943588	HQC	501.112189
Durbin-Watson	0.2262	Total R-Square	0.7294

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	216.4837	2.1758	99.49	<.0001
PRESLOPE	1	-0.1916	0.0516	-3.71	0.0004
INTERVENTION	1	23.9309	5.7251	4.18	<.0001
POSTSLOPE	1	3.1042	0.9624	3.23	0.0019

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	52.4862	1.000000	|**********|
1	44.9091	0.855636	|********** |

Preliminary MSE	14.0604

Estimates of Autoregressive Parameters			
Lag	Coefficient	Standard Error	t Value
1	-0.855636	0.063232	-13.53

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.8556

Coefficients for First NLAG Observations	
	1
1	0.5175784426

Algorithm converged.

H2 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	316.907824	DFE	67
MSE	4.72997	Root MSE	2.17485
SBC	335.495922	AIC	324.112591
MAE	1.58271207	AICC	325.021682
MAPE	0.74161856	HQC	328.644329
Log Likelihood	-157.0563	Transformed Regression R-Square	0.2767
Durbin-Watson	0.5989	Total R-Square	0.9773
		Observations	72

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	197.6118	11.1277	17.76	<.0001
PRESLOPE	1	0.3676	0.2195	1.67	0.0987
INTERVENTION	1	1.7536	2.3322	0.75	0.4548
POSTSLOPE	1	2.7484	0.7612	3.61	0.0006
AR1	1	-0.9769	0.0231	-42.37	<.0001

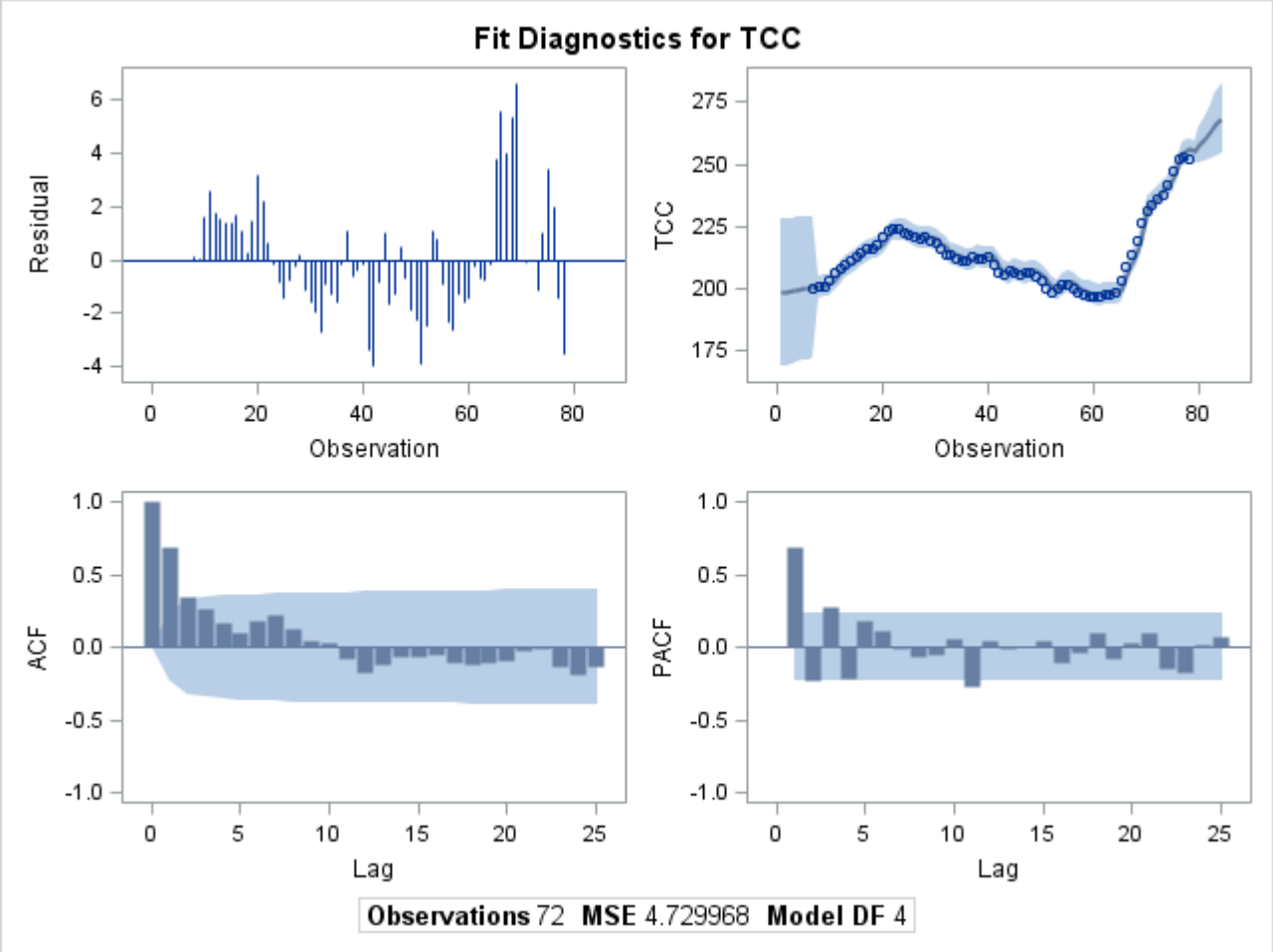
Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9769

Coefficients for First NLAG Observations	
	1
1	0.2138015282

Autoregressive parameters assumed given					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	197.6118	10.9229	18.09	<.0001
PRESLOPE	1	0.3676	0.2027	1.81	0.0742
INTERVENTION	1	1.7536	2.3322	0.75	0.4548
POSTSLOPE	1	2.7484	0.7417	3.71	0.0004

H2 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure



H3 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H3 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	577.03905	DFE	68
MSE	8.48587	Root MSE	2.91305
SBC	371.283368	AIC	362.176704
MAE	2.34227006	AICC	362.773719
MAPE	4.76084177	HQC	365.802094
Durbin-Watson	0.3319	Total R-Square	0.9885

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	15.2108	0.8502	17.89	<.0001
PRESLOPE	1	1.0246	0.0202	50.77	<.0001
INTERVENTION	1	12.3338	2.2371	5.51	<.0001
POSTSLOPE	1	2.9125	0.3761	7.74	<.0001

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	8.0144	1.000000	|**********|
1	6.2695	0.782277	|********** |

Preliminary MSE	3.1099

Estimates of Autoregressive Parameters			
Lag	Coefficient	Standard Error	t Value
1	-0.782277	0.076103	-10.28

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.7823

Coefficients for First NLAG Observations	
	1
1	0.6229303825

Algorithm converged.

H3 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	71.8840012	DFE	67
MSE	1.07290	Root MSE	1.03581
SBC	228.812976	AIC	217.429645
MAE	0.72234536	AICC	218.338736
MAPE	1.29512151	HQC	221.961383
Log Likelihood	-103.71482	Transformed Regression R-Square	0.7768
Durbin-Watson	0.7982	Total R-Square	0.9986
		Observations	72

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	18.9297	7.4124	2.55	0.0129
PRESLOPE	1	1.0653	0.2234	4.77	<.0001
INTERVENTION	1	1.6592	1.1109	1.49	0.1400
POSTSLOPE	1	2.7476	0.5321	5.16	<.0001
AR1	1	-0.9798	0.0476	-20.57	<.0001

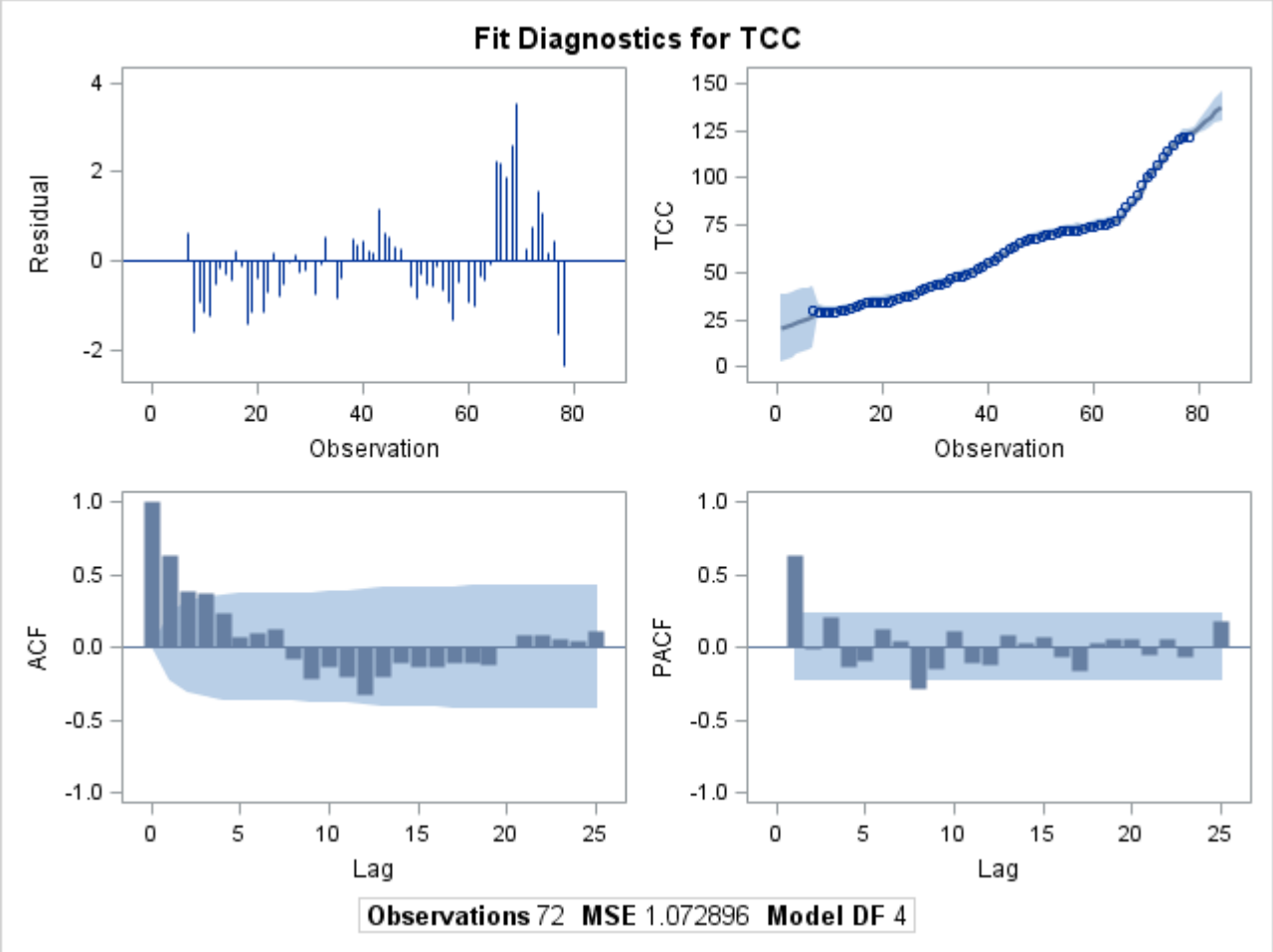
Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9798

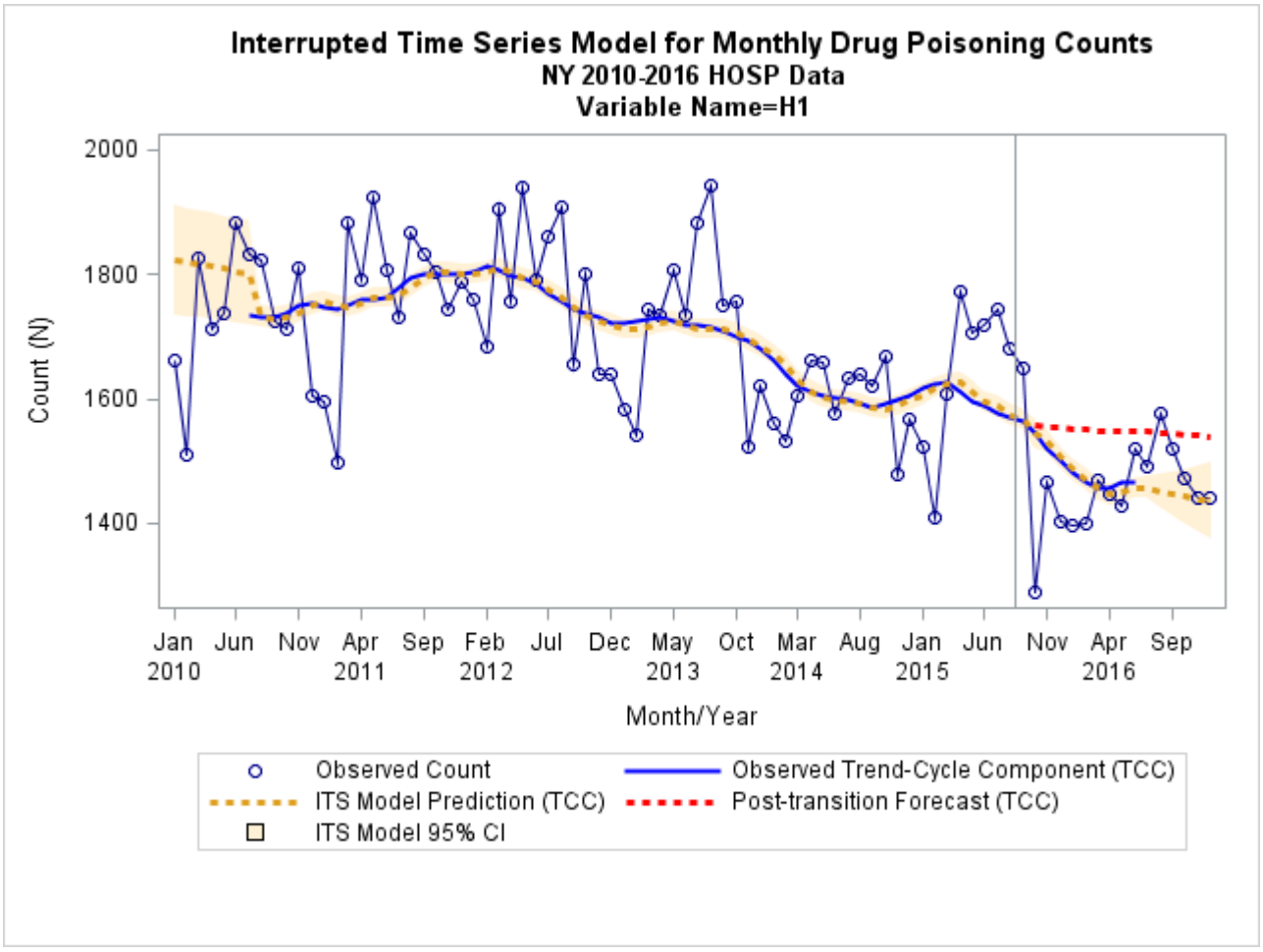
Coefficients for First NLAG Observations	
	1
1	0.2000287203

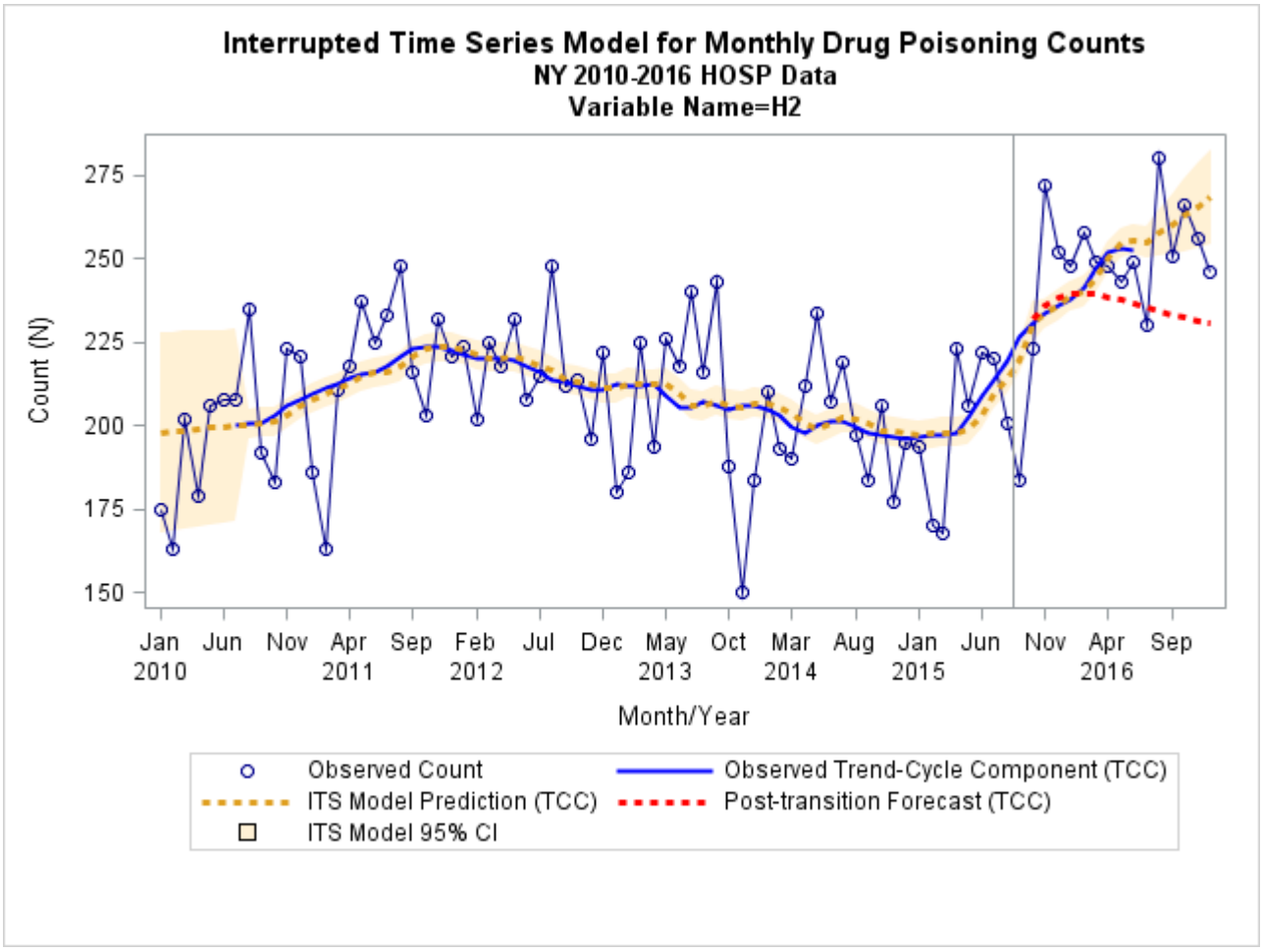
Autoregressive parameters assumed given					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	18.9297	5.5550	3.41	0.0011
PRESLOPE	1	1.0653	0.1000	10.65	<.0001
INTERVENTION	1	1.6592	1.1093	1.50	0.1394
POSTSLOPE	1	2.7476	0.3550	7.74	<.0001

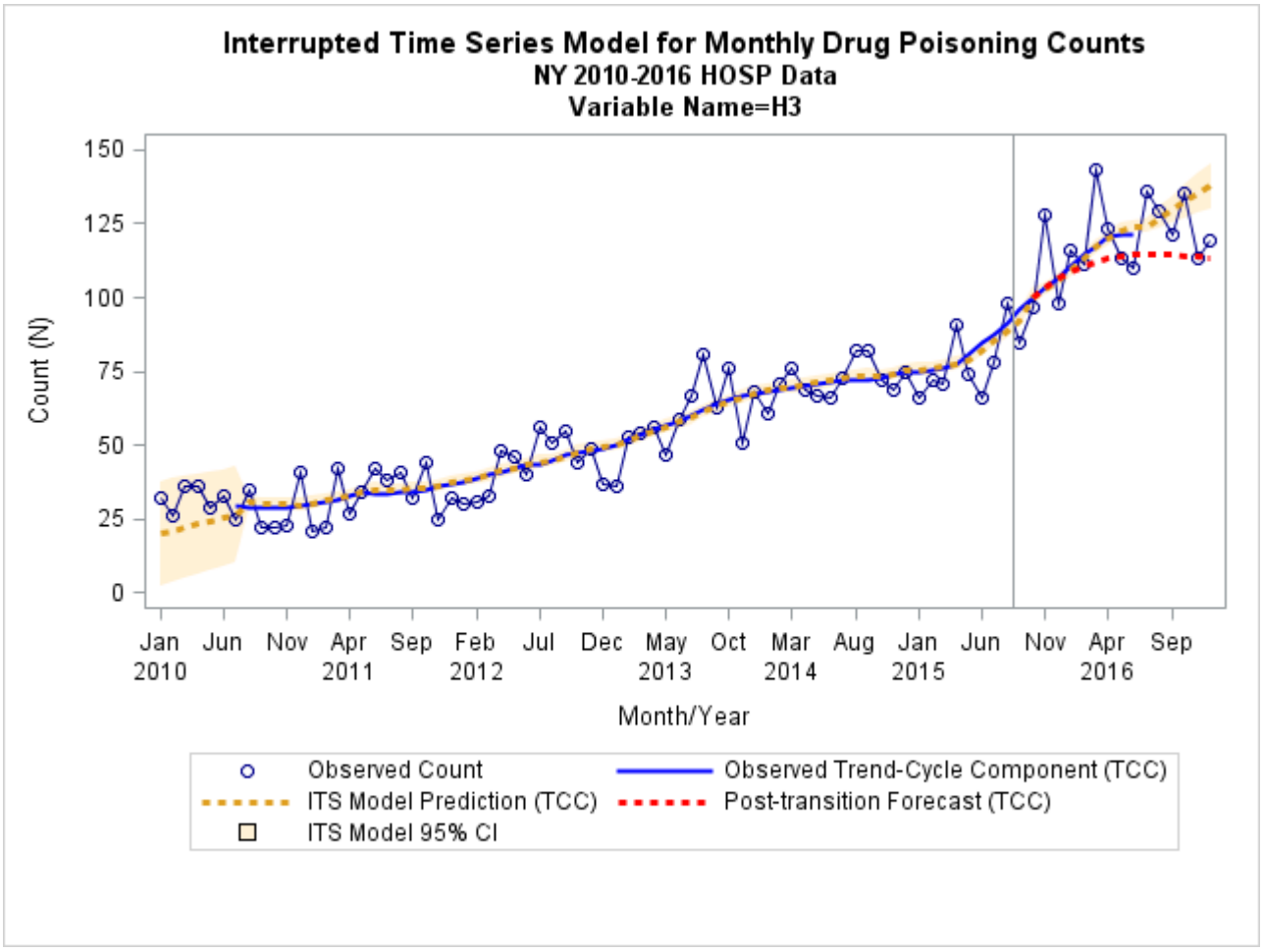
H3 INTERRUPTED TIME SERIES MODEL
NY 2010-2016 HOSP Data

The AUTOREG Procedure




Interrupted Time Series Model for Monthly Drug Poisoning Counts
NY 2010-2016 HOSP Data
Variable Name=H1
Count (N)
2000
1800
1600
1400
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
NY 2010-2016 HOSP Data
Variable Name=H2
Count (N)
275
250
225
200
175
150
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
NY 2010-2016 HOSP Data
Variable Name=H3
Count (N)
150
125
100
75
50
25
0
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