H1 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H1 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	4031.9293	DFE	68
MSE	59.29308	Root MSE	7.70020
SBC	511.257872	AIC	502.151208
MAE	6.09720643	AICC	502.748223
MAPE	5.28120391	HQC	505.776598
Durbin-Watson	0.0730	Total R-Square	0.5821

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	111.7160	2.2475	49.71	<.0001
PRESLOPE	1	0.1622	0.0534	3.04	0.0033
INTERVENTION	1	14.8352	5.9135	2.51	0.0145
POSTSLOPE	1	1.0667	0.9941	1.07	0.2871

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	55.9990	1.000000	| |********************|
1	52.4462	0.936555	| |******************* |

Preliminary MSE	6.8803

Estimates of Autoregressive Parameters			
Lag	Coefficient	Standard Error	t Value
1	-0.936555	0.042823	-21.87

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9366

Coefficients for First NLAG Observations	
	1
1	0.3505200752

Algorithm converged.

H1 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	136.475343	DFE	67
MSE	2.03695	Root MSE	1.42722
SBC	275.446569	AIC	264.063238
MAE	1.10195243	AICC	264.972329
MAPE	0.92468226	HQC	268.594976
Log Likelihood	-127.03162	Transformed Regression R-Square	0.1585
Durbin-Watson	0.8836	Total R-Square	0.9859
		Observations	72

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	122.6389	10.6667	11.50	<.0001
PRESLOPE	1	0.1353	0.2423	0.56	0.5784
INTERVENTION	1	2.2468	1.5233	1.47	0.1449
POSTSLOPE	1	1.1344	0.5220	2.17	0.0333
AR1	1	-0.9875	0.0224	-44.14	<.0001

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.9875

Coefficients for First NLAG Observations

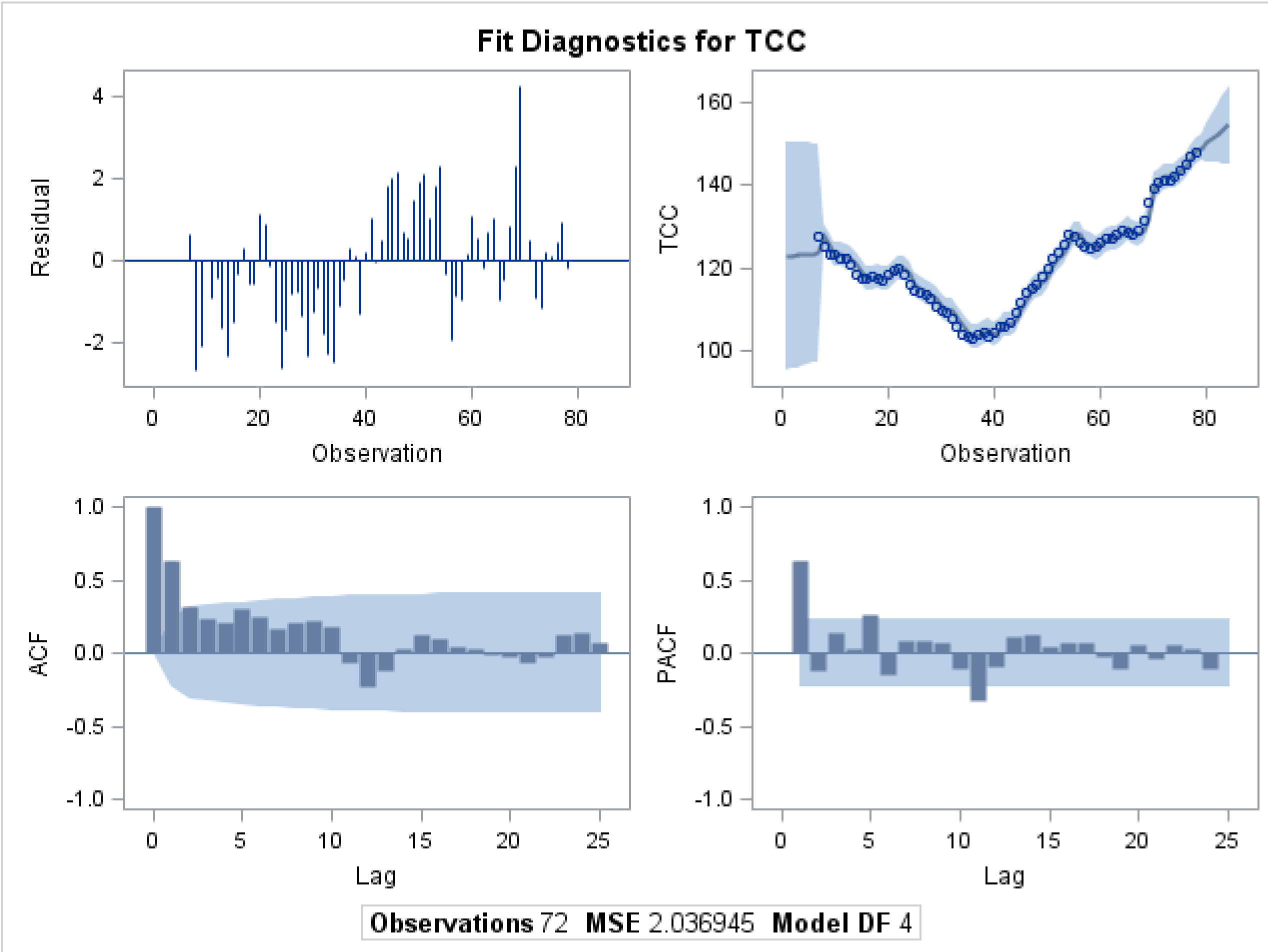
	1
1	0.1577344682

Autoregressive parameters assumed given

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	122.6389	9.6025	12.77	<.0001
PRESLOPE	1	0.1353	0.1519	0.89	0.3763
INTERVENTION	1	2.2468	1.5230	1.48	0.1448
POSTSLOPE	1	1.1344	0.4951	2.29	0.0251

H1 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure



H2 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H2 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	98.6421726	DFE	68
MSE	1.45062	Root MSE	1.20442
SBC	244.101772	AIC	234.995108
MAE	0.96868348	AICC	235.592123
MAPE	9.76263617	HQC	238.620498
Durbin-Watson	0.1168	Total R-Square	0.7121

Parameter Estimates					
Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	8.6283	0.3515	24.54	<.0001
PRESLOPE	1	0.0408	0.008345	4.88	<.0001
INTERVENTION	1	1.8937	0.9250	2.05	0.0445
POSTSLOPE	1	0.3785	0.1555	2.43	0.0176

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	1.3700	1.000000	| |********************|
1	1.2555	0.916407	| |****************** |

Preliminary MSE	0.2195

Estimates of Autoregressive Parameters			
Lag	Coefficient	Standard Error	t Value
1	-0.916407	0.048898	-18.74

Expected Autocorrelations	
Lag	Autocorr
0	1.0000
1	0.9164

Coefficients for First NLAG Observations	
	1
1	0.400248519

Algorithm converged.

H2 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	7.01211907	DFE	67
MSE	0.10466	Root MSE	0.32351
SBC	61.1731239	AIC	49.7897933
MAE	0.24448901	AICC	50.6988842
MAPE	2.32949012	HQC	54.321531
Log Likelihood	-19.894897	Transformed Regression R-Square	0.1546
Durbin-Watson	1.1620	Total R-Square	0.9795
		Observations	72

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	9.8409	1.9152	5.14	<.0001
PRESLOPE	1	0.0457	0.0475	0.96	0.3387
INTERVENTION	1	-0.1183	0.3469	-0.34	0.7342
POSTSLOPE	1	0.3062	0.1238	2.47	0.0159
AR1	1	-0.9784	0.0331	-29.58	<.0001

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.9784

Coefficients for First NLAG Observations

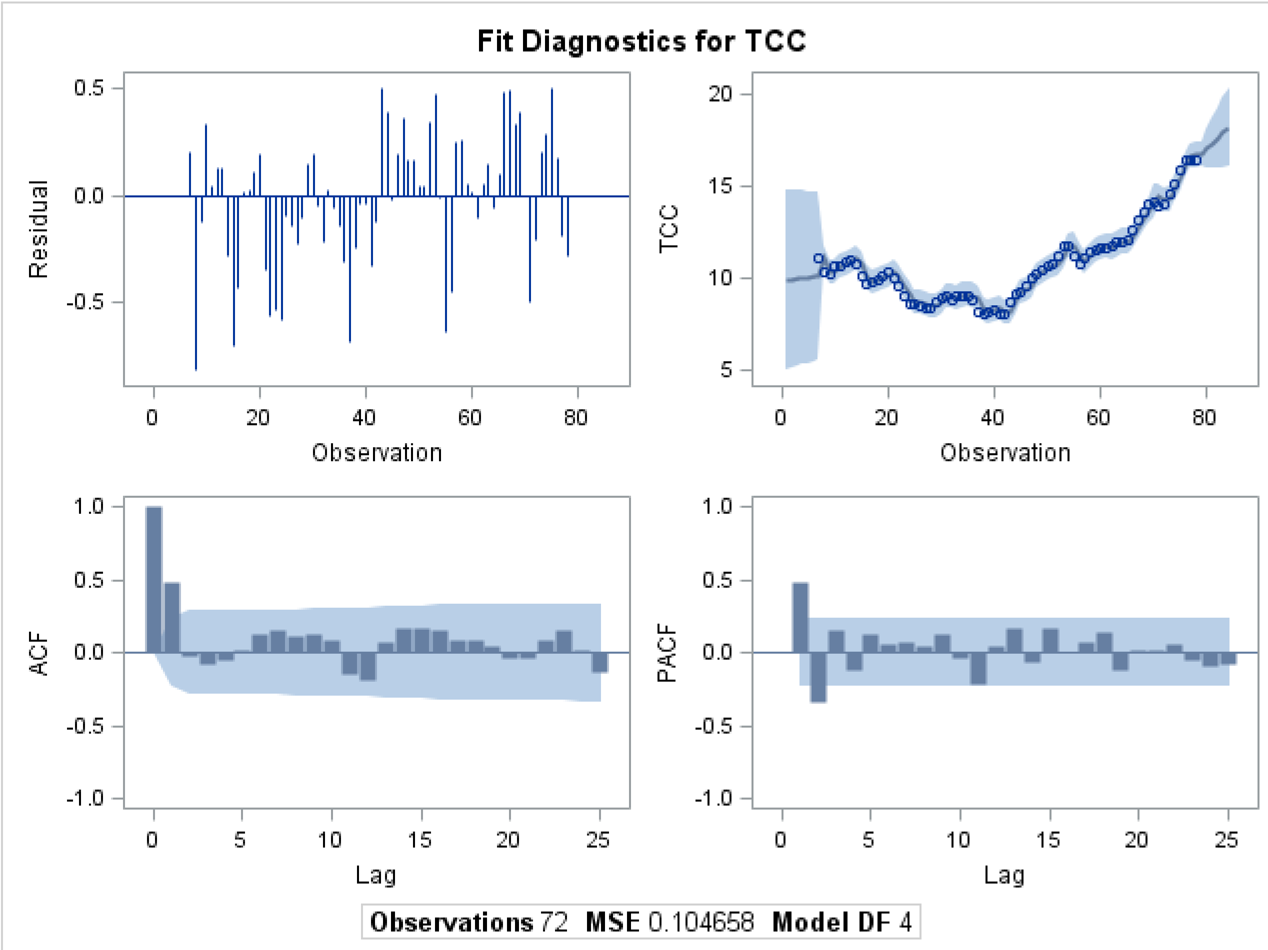
	1
1	0.2067459716

Autoregressive parameters assumed given

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	9.8409	1.6797	5.86	<.0001
PRESLOPE	1	0.0457	0.0307	1.49	0.1409
INTERVENTION	1	-0.1183	0.3467	-0.34	0.7340
POSTSLOPE	1	0.3062	0.1106	2.77	0.0073

H2 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure



H3 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Dependent Variable	TCC
	Trend-Cycle Component

H3 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Ordinary Least Squares Estimates			
SSE	2.7646397	DFE	68
MSE	0.04066	Root MSE	0.20163
SBC	-13.268604	AIC	-22.375269
MAE	0.15622281	AICC	-21.778254
MAPE	38.0360997	HQC	-18.749879
Durbin-Watson	0.1154	Total R-Square	0.8855

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	-0.2411	0.0589	-4.10	0.0001
PRESLOPE	1	0.0214	0.001397	15.31	<.0001
INTERVENTION	1	-0.2285	0.1548	-1.48	0.1446
POSTSLOPE	1	0.1451	0.0260	5.58	<.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	0.0384	1.000000	| |********************|
1	0.0359	0.936099	| |******************* |
2	0.0318	0.828948	| |***************** |

Preliminary MSE	0.00406

Estimates of Autoregressive Parameters

Lag	Coefficient	Standard Error	t Value
1	-1.294244	0.113726	-11.38
2	0.382592	0.113726	3.36

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.9361
2	0.8289

Coefficients for First NLAG Observations

	1	2
1	0.3249751508	0
2	-0.864878161	0.9239172489

Algorithm converged.

H3 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

The AUTOREG Procedure

Maximum Likelihood Estimates			
SSE	0.22703414	DFE	66
MSE	0.00344	Root MSE	0.05865
SBC	-181.99725	AIC	-195.65724
MAE	0.04485459	AICC	-194.36493
MAPE	9.52120738	HQC	-190.21916
Log Likelihood	103.828621	Transformed Regression R-Square	0.5507
Durbin-Watson	1.7142	Total R-Square	0.9906
		Observations	72

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	-0.1554	0.1729	-0.90	0.3719
PRESLOPE	1	0.0193	0.003958	4.87	<.0001
INTERVENTION	1	-0.0894	0.0598	-1.50	0.1396
POSTSLOPE	1	0.1282	0.0268	4.79	<.0001
AR1	1	-1.3693	0.1124	-12.18	<.0001
AR2	1	0.4489	0.1129	3.98	0.0002

Expected Autocorrelations

Lag	Autocorr
0	1.0000
1	0.9451
2	0.8452

Coefficients for First NLAG Observations

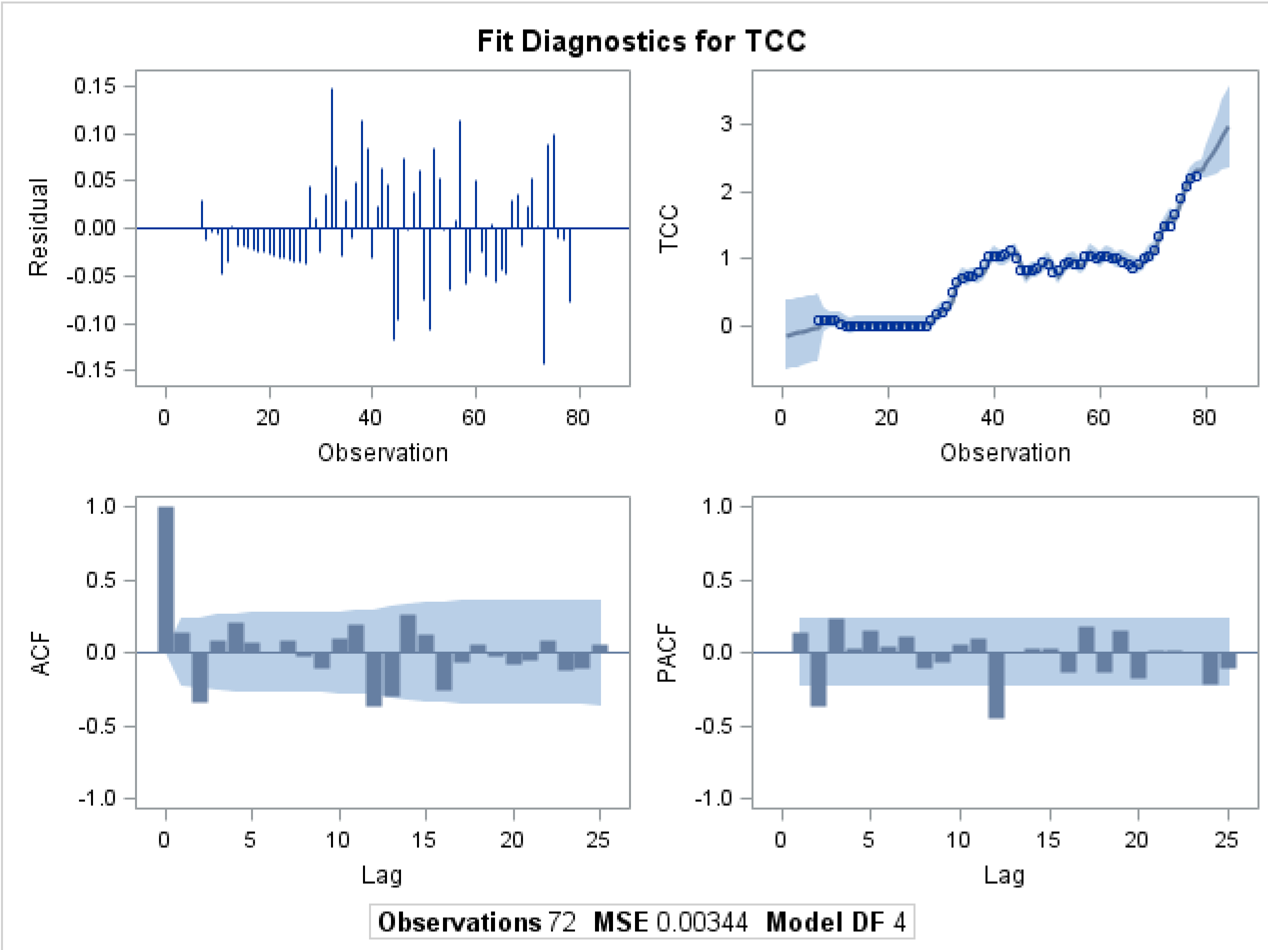
	1	2
1	0.2920451327	0
2	-0.844513703	0.8935847768

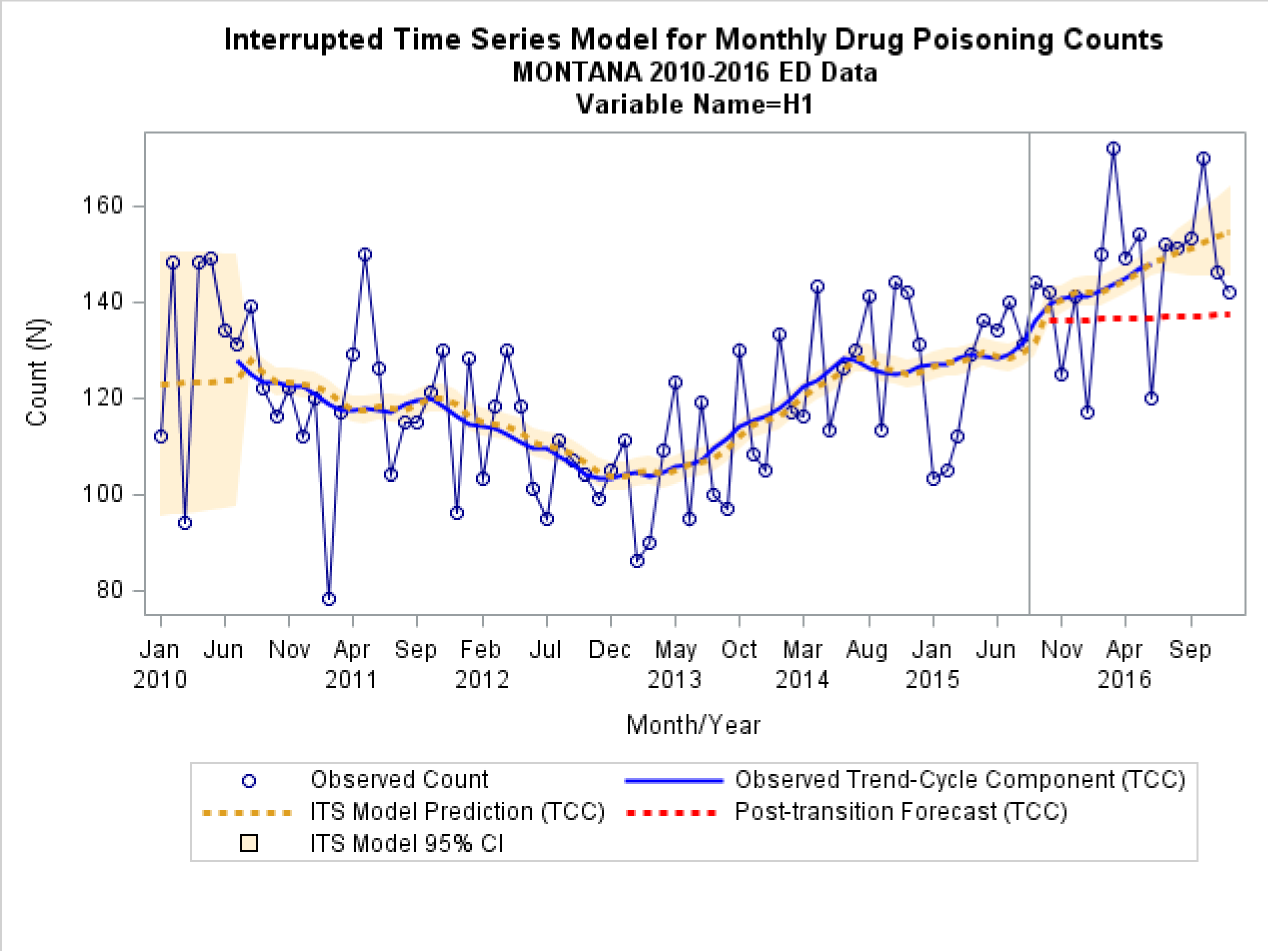
Autoregressive parameters assumed given

Variable	DF	Estimate	Standard Error	t Value	Approx Pr > |t|
Intercept	1	-0.1554	0.1724	-0.90	0.3706
PRESLOPE	1	0.0193	0.003935	4.90	<.0001
INTERVENTION	1	-0.0894	0.0597	-1.50	0.1390
POSTSLOPE	1	0.1282	0.0264	4.86	<.0001

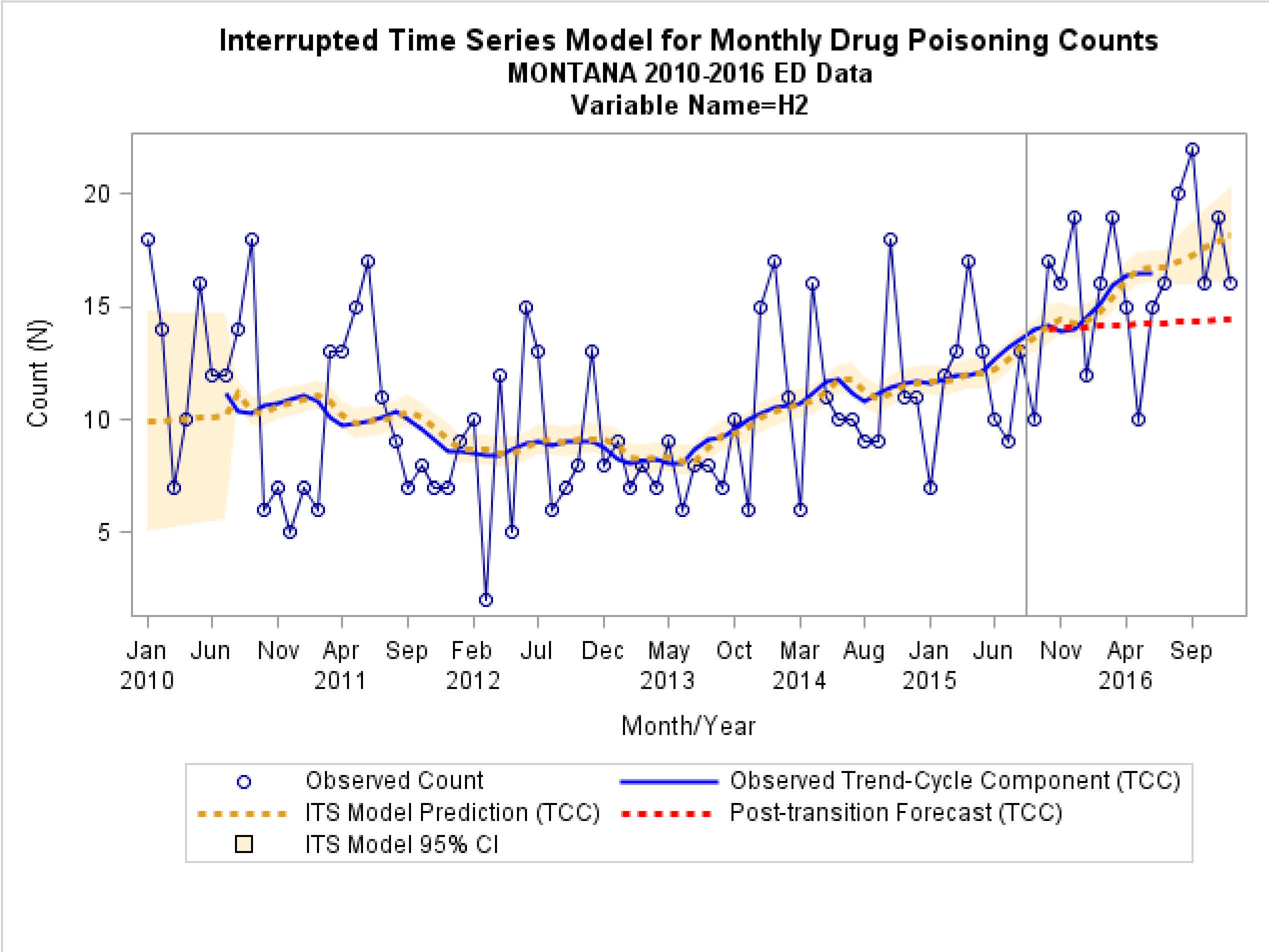
H3 INTERRUPTED TIME SERIES MODEL
MONTANA 2010-2016 ED Data

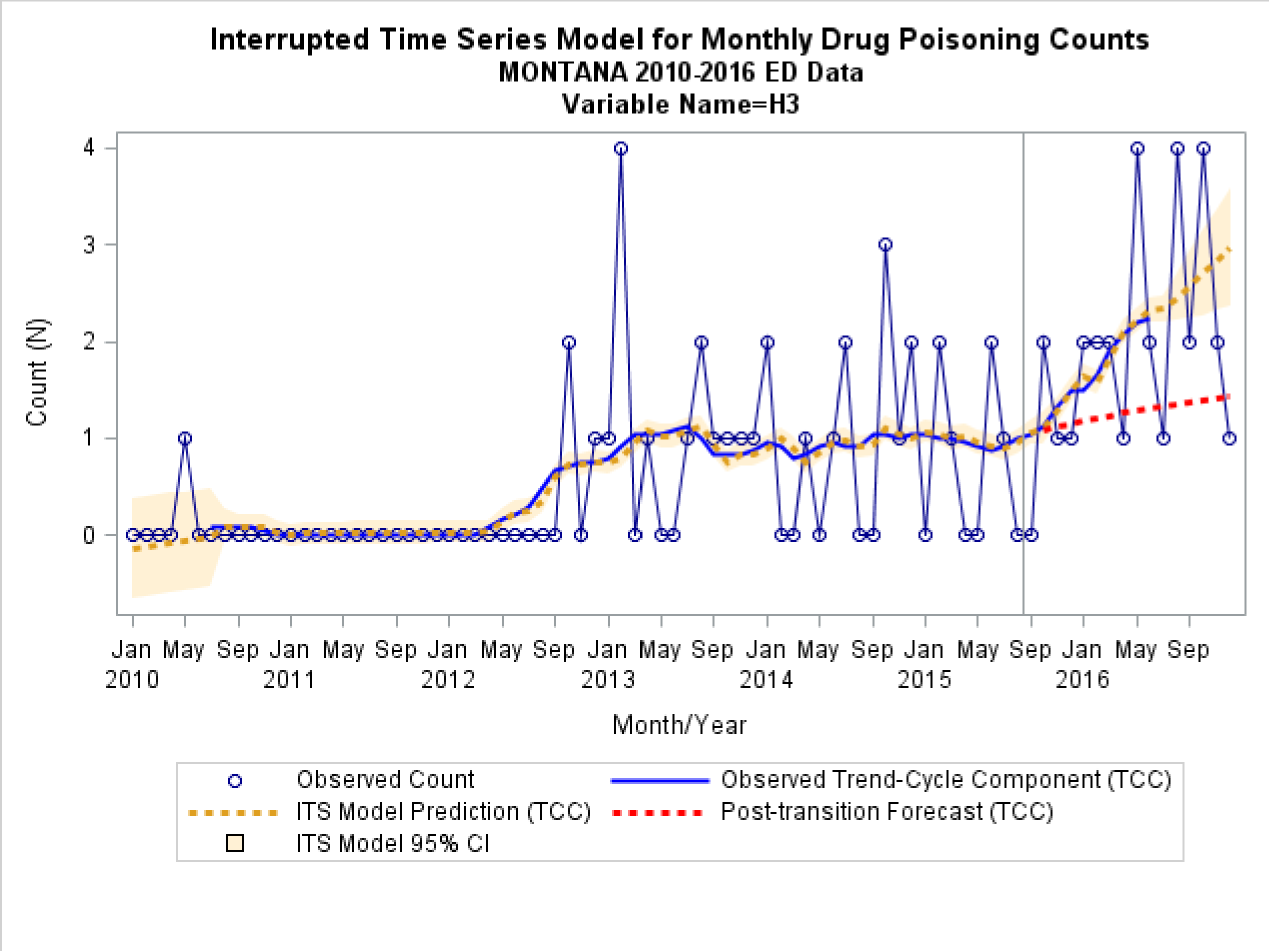
The AUTOREG Procedure





Interrupted Time Series Model for Monthly Drug Poisoning Counts
MONTANA 2010-2016 ED Data
Variable Name=H1
Count (N)
160
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
MONTANA 2010-2016 ED Data
Variable Name=H2
Count (N)
20
15
10
5
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
MONTANA 2010-2016 ED Data
Variable Name=H3
Count (N)
4
3
2
1
0
Jan 2010
May
Sep
Jan 2011
May
Sep
Jan 2012
May
Sep
Jan 2013
May
Sep
Jan 2014
May
Sep
Jan 2015
May
Sep
Jan 2016
May
Sep
Month/Year
Observed Count
Observed Trend-Cycle Component (TCC)
ITS Model Prediction (TCC)
Post-transition Forecast (TCC)
ITS Model 95% CI