

Chapter 4 CodeBook

Chapter 4.1_Spatiotemporal Mapping of Drug Resistant TB

Variable Information						
Variable	Position	Label	Measurement Level	Role	Column Width	Alignment
Gender	1	<none>	Nominal	Input	8	Right
Village	2	<none>	Nominal	Input	8	Left
Binary_Case_Type	3	Case Type	Nominal	Input	8	Right
MDR	4	<none>	Nominal	Input	8	Right
MDRandEthR	5	<none>	Nominal	Input	15	Right
DrugResistance	6	<none>	Nominal	Input	14	Right
DR_Coded	7	<none>	Nominal	Input	12	Right
Rif_R_Binary	8	<none>	Nominal	Input	13	Right
Eth_R	9	<none>	Nominal	Input	10	Right
Eth_R_Binary	10	<none>	Nominal	Input	10	Right
INH_R_Binary	11	<none>	Nominal	Input	8	Right
YEAR	12	<none>	Ordinal	Input	8	Right

Variable Information		
Variable	Print Format	Write Format
Gender	F8	F8
Village	A8	A8
Binary_Case_Type	F8	F8
MDR	F8	F8
MDRandEthR	F8	F8
DrugResistance	A5	A5
DR_Coded	F8	F8
Rif_R_Binary	F8	F8
Eth_R	A2	A2
Eth_R_Binary	A2	A2
INH_R_Binary	F8	F8
YEAR	F8	F8

Variables in the working file

Variable Values		
Value	Label	
Gender	0	Male
	1	Female
Binary_Case_Type	0	New case

	1	Full or partial treatment
MDR	0	Not multidrug-resistant TB
	1	MDR-TB
MDRandEthR	0	Other
	1	MDR with Ethionamide (Eth) resistance
	2	MDR with no Eth-R
DrugResistance	0	Isoniazid (H) Resistant
	1	Rifampicin (R) Resistant
	2	MDR-TB
	99	Other
DR_Coded	0	H Resistant
	1	R Resistant
	2	MDR
	99	Other Resistance
Rif_R_Binary	0	Not Rif Resistant
	1	Rif Resistant
Eth_R	0	Ethionamide Susceptible
	1	Ethionamide Resistant
	99	Not tested
Eth_R_Binary	0	Not Ethionamide Resistant
	1	Ethionamide Resistant
INH_R_Binary	0	Not INH-R
	1	INH-R

Chapter 4.3_Time To Treat

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width
Patient_delay	1	<none>	Scale	Input	8
Pdelay_over30_days	2	<none>	Nominal	Input	12
Healthsys_delay	3	<none>	Scale	Input	11
HSdelay_over14_days	4	<none>	Nominal	Input	8
Dx_to_Rx	5	<none>	Nominal	Input	8
Dx_to_Rx_sans_died_tsf_out	6	<none>	Scale	Input	15
Dx_to_Event2	7	<none>	Scale	Input	8
Event_explanation	8	<none>	Nominal	Input	8
Dx_to_Event_over7days2	9	<none>	Nominal	Input	8
Dx_to_Event	10	<none>	Scale	Input	8
Dx2Rx_over_7_days	11	<none>	Nominal	Input	8
Total_time_to_treatment	12	Total time to treatment commencement	Scale	Input	14
Tdelay_over51or93	13	<none>	Nominal	Input	12
Treatment_Group	14	<none>	Nominal	Input	8
GXP	15	<none>	Nominal	Input	8
Xpert_Rx_Grp	16	<none>	Nominal	Input	8
Top_Western	17	<none>	Nominal	Input	8
Village	18	<none>	Nominal	Input	8
Visa_Status	19	<none>	Nominal	Input	8
Case_type	20	<none>	Nominal	Input	10
Binary_Case_Type	21	Case Type	Nominal	Input	8
DR_Coded	22	<none>	Nominal	Input	8
YEAR	23	<none>	Ordinal	Input	8
New_YrGrp	24	<none>	Nominal	Input	8
After_2016	25	<none>	Nominal	Input	12
Disease_Site	26	<none>	Nominal	Input	9

Variable Information

Variable	Alignment	Print Format	Write Format
Patient_delay	Right	F8	F8
Pdelay_over30_days	Right	F8	F8
Healthsys_delay	Right	F8	F8
HSdelay_over14_days	Right	F8	F8
Dx_to_Rx	Right	F10	F10
Dx_to_Rx_sans_died_tsf_out	Right	F8	F8
Dx_to_Event2	Right	F8	F8
Event_explanation	Left	A40	A40
Dx_to_Event_over7days2	Right	F8	F8
Dx_to_Event	Right	F8	F8

Dx2Rx_over_7_days	Right	F8	F8
Total_time_to_treatment	Right	F8	F8
Tdelay_over51or93	Right	F1	F1
Treatment_Group	Right	F8	F8
GXP	Right	F8	F8
Xpert_Rx_Grp	Right	F8.2	F8.2
Top_Western	Right	F7	F7
Village	Left	A8	A8
Visa_Status	Right	F8	F8
Case_type	Right	F8	F8
Binary_Case_Type	Right	F8	F8
DR_Coded	Right	F8	F8
YEAR	Right	F8	F8
New_YrGrp	Right	F8	F8
After_2016	Left	A8	A8
Disease_Site	Right	F8	F8

Variables in the working file

Variable Values

Value		Label
Pdelay_over30_days	0	Patient delay 30 days and under
	1	Patient delay over 30 days
HSdelay_over14_days	0	Doctor delay 14 days and under
	1	Doctor delay over 14 days
Dx_to_Rx	666	Died
	998	Transfer Out
	999	Unknown
Dx_to_Event_over7days2	0	Delay 7 days or under
	1	Delay over 7 days
Dx2Rx_over_7_days	0	Dx to Rx 7 days and under
	1	Dx to Rx over 7 days
Tdelay_over51or93	0	51 (AFB pos) or 93 (AFB neg) days and under
	1	Over 51 or 93 days
Treatment_Group	0	Transfer out or death
	1	Treatment commenced
GXP	0	No GXP
	1	GXP
Xpert_Rx_Grp	.00	Rx pre Xpert
	1.00	Rx post Xpert
Visa_Status	0	Australian resident

	1	PNG Non-Treaty Visitor
	2	PNG Treaty Visitor
	0	New case
Case_type	1	Full or partial treatment overseas
	2	Full or partial treatment in Australia
	0	New case
Binary_Case_Type	1	Full or partial treatment
	0	H Resistant
	1	R Resistant
DR_Coded	2	MDR
	99	Other Resistance
	0	2000-2005
New_YrGrp	1	2006-2012
	2	2013-2015
	3	2016-2020
Disease_Site	0	XPTB
	1	PTB
	2	Combined PTB and XPTB

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width
Patient_delay	1	<none>	Scale	Input	8
Pdelay_over30_days	2	<none>	Nominal	Input	12
Healthsys_delay	3	<none>	Scale	Input	11
HSdelay_over14_days	4	<none>	Nominal	Input	8
Dx_to_Rx	5	<none>	Nominal	Input	8
Dx_to_Rx_sans_died_tsf_out	6	<none>	Scale	Input	15
Dx_to_Event2	7	<none>	Scale	Input	8
Event_explanation	8	<none>	Nominal	Input	8
Dx_to_Event_over7days2	9	<none>	Nominal	Input	8
Dx_to_Event	10	<none>	Scale	Input	8
Dx2Rx_over_7_days	11	<none>	Nominal	Input	8
Total_time_to_treatment	12	Total time to treatment commencement	Scale	Input	14
Tdelay_over51or93	13	<none>	Nominal	Input	12
Treatment_Group	14	<none>	Nominal	Input	8
GXP	15	<none>	Nominal	Input	8
Xpert_Rx_Grp	16	<none>	Nominal	Input	8
Top_Western	17	<none>	Nominal	Input	8
Village	18	<none>	Nominal	Input	8
Visa_Status	19	<none>	Nominal	Input	8

Case_type	20	<none>	Nominal	Input	10
Binary_Case_Type	21	Case Type	Nominal	Input	8
DR_Coded	22	<none>	Nominal	Input	8
YEAR	23	<none>	Ordinal	Input	8
New_YrGrp	24	<none>	Nominal	Input	8
After_2016	25	<none>	Nominal	Input	12
Disease_Site	26	<none>	Nominal	Input	9

Variable Information

Variable	Alignment	Print Format	Write Format
Patient_delay	Right	F8	F8
Pdelay_over30_days	Right	F8	F8
Healthsys_delay	Right	F8	F8
HSdelay_over14_days	Right	F8	F8
Dx_to_Rx	Right	F10	F10
Dx_to_Rx_sans_died_tsf_out	Right	F8	F8
Dx_to_Event2	Right	F8	F8
Event_explanation	Left	A40	A40
Dx_to_Event_over7days2	Right	F8	F8
Dx_to_Event	Right	F8	F8
Dx2Rx_over_7_days	Right	F8	F8
Total_time_to_treatment	Right	F8	F8
Tdelay_over51or93	Right	F1	F1
Treatment_Group	Right	F8	F8
GXP	Right	F8	F8
Xpert_Rx_Grp	Right	F8.2	F8.2
Top_Western	Right	F7	F7
Village	Left	A8	A8
Visa_Status	Right	F8	F8
Case_type	Right	F8	F8
Binary_Case_Type	Right	F8	F8
DR_Coded	Right	F8	F8
YEAR	Right	F8	F8
New_YrGrp	Right	F8	F8
After_2016	Left	A8	A8
Disease_Site	Right	F8	F8

Variables in the working file

Variable Values

Value		Label
Pdelay_over30_days	0	Patient delay 30 days and under
	1	Patient delay over 30 days

HSdelay_over14_days	0	Doctor delay 14 days and under
	1	Doctor delay over 14 days
Dx_to_Rx	666	Died
	998	Transfer Out
	999	Unknown
Dx_to_Event_over7days2	0	Delay 7 days or under
	1	Delay over 7 days
Dx2Rx_over_7_days	0	Dx to Rx 7 days and under
	1	Dx to Rx over 7 days
Tdelay_over51or93	0	51 (AFB pos) or 93 (AFB neg) days and under
	1	Over 51 or 93 days
Treatment_Group	0	Transfer out or death
	1	Treatment commenced
GXP	0	No GXP
	1	GXP
Xpert_Rx_Grp	.00	Rx pre Xpert
	1.00	Rx post Xpert
Visa_Status	0	Australian resident
	1	PNG Non-Treaty Visitor
	2	PNG Treaty Visitor
Case_type	0	New case
	1	Full or partial treatment overseas
	2	Full or partial treatment in Australia
Binary_Case_Type	0	New case
	1	Full or partial treatment
DR_Coded	0	H Resistant
	1	R Resistant
	2	MDR
	99	Other Resistance
New_YrGrp	0	2000-2005
	1	2006-2012
	2	2013-2015
	3	2016-2020
Disease_Site	0	XPTB
	1	PTB
	2	Combined PTB and XPTB

Chapter 4.4_AllPatients

Variable Information

Variable	Position	Label	Measurement Level	Role	Column Width	Alignment	Print Format	Write Format
Age	1	<none>	Nominal	Input	8	Left	A8	A8
New_agegrp	2	<none>	Nominal	Input	8	Left	A8	A8
Sex	3	<none>	Nominal	Input	8	Right	F8	F8
AFB_Pos	4	<none>	Nominal	Input	8	Right	F8	F8
PHC	5	<none>	Nominal	Input	8	Right	F8	F8
Top_Western	6	<none>	Nominal	Input	8	Right	F7	F7
Village	7	<none>	Nominal	Input	12	Left	A23	A23
Country_of_birth	8	<none>	Nominal	Input	8	Right	F8	F8
Visa_Status	9	<none>	Nominal	Input	8	Right	F8	F8
Case_type	10	<none>	Nominal	Input	10	Right	F8	F8
Binary_Case_Type	11	Case Type	Nominal	Input	8	Right	F8	F8
HIV	12	<none>	Nominal	Input	8	Right	F8	F8
Bin_Cavitory	13	<none>	Nominal	Input	8	Right	F8	F8
Outcome	14	<none>	Nominal	Input	8	Right	F8	F8
Bin_Outcome	15	<none>	Nominal	Input	8	Right	F8	F8
All_Outcomes	16	<none>	Nominal	Input	19	Right	A8	A8
Good_Outcome	17	<none>	Nominal	Input	8	Left	A8	A8
GoodOut2016	18	<none>	Nominal	Input	15	Left	A8	A8
CloseContact	19	<none>	Nominal	Input	8	Right	F8	F8
Med_Risk_Factors	20	<none>	Nominal	Input	8	Right	F8	F8
MDR	21	<none>	Nominal	Input	8	Right	F8	F8
Cough	22	<none>	Nominal	Input	8	Right	F8	F8
Fever	23	<none>	Nominal	Input	8	Right	F8	F8
Weight_Loss	24	<none>	Nominal	Input	12	Right	F8	F8
Night_sweats	25	<none>	Nominal	Input	11	Right	F8	F8
Haemoptysis	26	<none>	Nominal	Input	12	Right	F8	F8
Signs_and_Symptoms	27	<none>	Nominal	Input	15	Right	F8	F8
DR_Coded	28	<none>	Nominal	Input	8	Right	F8	F8
Rif_R_Binary	29	<none>	Nominal	Input	12	Right	F8	F8
Eth_R	30	<none>	Nominal	Input	10	Right	A2	A2
Eth_R_Binary	31	<none>	Nominal	Input	10	Right	A2	A2
Haemaglobin	32	<none>	Scale	Input	8	Right	F8.2	F8.2
Anaemia	33	<none>	Nominal	Input	8	Right	F8	F8
Anaemia_Levels	34	<none>	Scale	Input	8	Right	F8	F8
Bloods_Risk	35	<none>	Nominal	Input	8	Right	F8	F8
YEAR	36	<none>	Ordinal	Input	8	Right	F8	F8
New_YrGrp	37	<none>	Nominal	Input	8	Right	F8	F8
B4_after_us	38	<none>	Nominal	Input	8	Left	A8	A8
Disease_Site	39	<none>	Nominal	Input	8	Right	F8	F8

PTB_Bin	40	<none>	Nominal	Input	8	Right	F8	F8
Albumin	41	<none>	Scale	Input	8	Right	F8.2	F8.2
Albumin_Lvls	42	<none>	Nominal	Input	8	Right	A8	A8
Albumin_Binary	43	<none>	Nominal	Input	8	Right	F8	F8
Lymphocyte_zscore	44	<none>	Scale	Input	10	Right	F6.2	F6.2
Lymphocyte_Binary	45	<none>	Nominal	Input	10	Right	F1	F1
Lymphocyte_Levels	46	<none>	Nominal	Input	10	Right	A8	A8
PTB_AFB	47	<none>	Nominal	Input	8	Right	F8	F8

Variables in the working file

Variable Values

Value		Label
New_agegrp	0	<5 years
	1	5-14 years
	2	15-29 years
	3	30-44 years
	4	45-59 years
	5	≥60 years
Sex	0	Male
	1	Female
AFB_Pos	0	AFB / GXP neg
	1	AFB / GXP pos
PHC	0	Thursday Island
	1	Murray Island
	2	Yorke Island
	3	Darnley
	4	Boigu Island
	5	Saibai Island
Country_of_birth	0	Australia or Other
	1	Papua New Guinea
Visa_Status	0	Australian resident
	1	PNG Non-Treaty Visitor
	2	PNG Treaty Visitor
Case_type	0	New case
	1	Full or partial treatment overseas
	2	Full or partial treatment in Australia
Binary_Case_Type	0	New case
	1	Full or partial treatment
HIV	0	Not tested / unknown result
	1	Negative
	2	Positive
Bin_Cavitary	0	Not cavitary or unknown or miliary
	1	Cavitary

Outcome	0	Poor
	1	Good
	2	Unknown
Bin_Outcome	0	Other Outcome
	1	Poor Outcome
All_Outcomes	0	Cured
	1	Completed treatment
	2	Defaulter
	3	Died
	4	Treatment failure
	99	Transfer out
Good_Outcome	0	Other outcomes
	1	Good outcome
GoodOut2016	0	Other
	1	Good outcome from 2016
CloseContact	0	No known TB contact
	1	Close TB contact
Med_Risk_Factors	0	No known risk factors
	1	Known risk factors (DM, renal, HIV)
MDR	0	Not MDR-TB
	1	MDR-TB
Cough	0	No cough
	1	Cough present
Fever	0	No fever
	1	Fever present
Weight_Loss	0	No weight loss
	1	Weight loss present
Night_sweats	0	No night sweats
	1	Night sweats present
Haemoptysis	0	No haemoptysis
	1	Haemoptysis present
DR_Coded	0	H Resistant
	1	R Resistant
	2	MDR
	99	Other Resistance
Rif_R_Binary	0	Not Rif Resistant
	1	Rif Resistant
Eth_R	0	Ethionamide Sensitive
	1	Ethionamide Resistant
	99	Not tested
Eth_R_Binary	0	Not Ethionamide Resistant
	1	Ethionamide Resistant
Anaemia	0	No anaemia
	1	Anaemia
Anaemia_Levels	0	No anaemia
	1	Anaemic_2SD

	2	Severely anaemic_>5SD
Bloods_Risk	0	Normal or other results
	1	Severely anaemic, low Alb, low lymphocyte
New_YrGrp	0	2000-2005
	1	2006-2012
	2	2013-2015
	3	2016-2020
Disease_Site	0	XPTB
	1	PTB
	2	Combined PTB and XPTB
PTB_Bin	0	XPTB
	1	PTB
	2	Combined PTB and XPTB
Albumin_Lvls	0	Normal
	1	Low
	2	High
Albumin_Binary	0	Albumin not low
	1	Low Albumin
Lymphocyte_Binary	0	Other lymphocyte level
	1	Low lymphocyte level
Lymphocyte_Levels	0	Normal
	1	Low
	2	High
PTB_AFB	0	PTB AFB Neg
	1	PTB AFB Pos
	2	Other incl XPTB

Chapter 4.4_MultipleImputation

Variable	Position	Variable Information						
		Label	Measurement Level	Role	Column Width	Alignment	Print Format	Write Format
Imputation_	1	Imputation Number	Nominal	Input	8	Right	F8	F8
Everyone	2	<none>	Nominal	Input	8	Right	F8	F8
Sex	3	<none>	Nominal	Input	8	Right	F8	F8
Treatment_Group	4	<none>	Nominal	Input	10	Right	F8	F8
AFB_Pos	5	<none>	Nominal	Input	8	Right	F8	F8
PHC	6	<none>	Nominal	Input	8	Right	F8	F8
Top_Western	7	<none>	Nominal	Input	8	Right	F7	F7
Village	8	<none>	Nominal	Input	14	Left	A19	A19
Country_of_birth	9	<none>	Nominal	Input	8	Right	F8	F8
Visa_Status	10	<none>	Nominal	Input	8	Right	F8	F8
Case_type	11	<none>	Nominal	Input	10	Right	F8	F8
Binary_Case_Type	12	Case Type	Nominal	Input	8	Right	F8	F8
HIV	13	<none>	Nominal	Input	8	Right	F8	F8
Bin_Cavitary	14	<none>	Nominal	Input	8	Right	F8	F8
Outcome	15	<none>	Nominal	Input	10	Right	F8	F8
Bin_Outcome	16	<none>	Nominal	Input	8	Right	F8	F8
All_Outcomes	17	<none>	Nominal	Input	19	Right	A8	A8
CloseContact	18	<none>	Nominal	Input	8	Right	F8	F8
Med_Risk_Factors	19	<none>	Nominal	Input	8	Right	F8	F8
MDR	20	<none>	Nominal	Input	8	Right	F8	F8
Cough	21	<none>	Nominal	Input	8	Right	F8	F8
Fever	22	<none>	Nominal	Input	8	Right	F8	F8
Weight_Loss	23	<none>	Nominal	Input	13	Right	F8	F8
Night_sweats	24	<none>	Nominal	Input	13	Right	F8	F8
Haemoptysis	25	<none>	Nominal	Input	12	Right	F8	F8
Signs_and_Symptoms	26	<none>	Nominal	Input	15	Right	F8	F8
DR_Coded	27	<none>	Nominal	Input	8	Right	F8	F8
Eth_R	28	<none>	Nominal	Input	10	Right	A2	A2
Eth_R_Binary	29	<none>	Nominal	Input	10	Right	A2	A2
Haemaglobin	30	<none>	Scale	Input	8	Right	F8.2	F8.2
Bloods_Risk	31	<none>	Nominal	Input	8	Right	F8	F8
YEAR	32	<none>	Ordinal	Input	8	Right	F8	F8
New_YrGrp	33	<none>	Nominal	Input	8	Right	F8	F8
Disease_Site	34	<none>	Nominal	Input	8	Right	F8	F8
Albumin	35	<none>	Scale	Input	8	Right	F8.2	F8.2
Albumin_Lvls	36	<none>	Nominal	Input	8	Right	A8	A8
Albumin_Binary	37	<none>	Nominal	Input	8	Right	F8	F8
AlbuminBinary_recoded	38	<none>	Nominal	Input	8	Right	F8.2	F8.2
Lymphocyte_zscore	39	<none>	Scale	Input	7	Right	F6.2	F6.2

Lymphocyte_Binary	40	<none>	Nominal	Input	10	Right	F1	F1
Lymphocyte_Levels	41	<none>	Nominal	Input	10	Right	A8	A8
Anaemia_recode	42	<none>	Nominal	Input	16	Right	F8.2	F8.2
AnaemiaLevels_recode	43	<none>	Nominal	Input	22	Right	F8.2	F8.2
LymphocyteBinary_recode	44	<none>	Nominal	Input	25	Right	F8.2	F8.2

Variables in the working file

Variable Values

Value		Label
Imputation_	0	Original data
Sex	0	Male
	1	Female
Treatment_Group	0	Transfer out or death
	1	Treatment commenced
AFB_Pos	0	AFB / GXP neg
	1	AFB / GXP pos
PHC	0	Thursday Island
	1	Murray Island
	2	Yorke Island
	3	Darnley
	4	Boigu Island
	5	Saibai Island
Country_of_birth	0	Australia or Other
	1	Papua New Guinea
Visa_Status	0	Australian resident
	1	PNG Non-Treaty Visitor
	2	PNG Treaty Visitor
Case_type	0	New case
	1	Full or partial treatment overseas
	2	Full or partial treatment in Australia
Binary_Case_Type	0	New case
	1	Full or partial treatment
HIV	0	Not tested / unknown result
	1	Negative
	2	Positive
Bin_Cavitory	0	Not cavitory or unknown or miliary
	1	Cavitory
Outcome	0	Poor
	1	Good
	2	Unknown
Bin_Outcome	0	Other Outcome
	1	Poor Outcome

All_Outcomes	0	Cured
	1	Completed treatment
	2	Defaulter
	3	Died
	4	Treatment failure
	98	Still on treatment
	99	Transfer out
CloseContact	0	No known TB contact
	1	Close TB contact
Med_Risk_Factors	0	No known risk factors
	1	Known risk factors (DM, renal, HIV)
MDR	0	Not MDR-TB
	1	MDR-TB
Cough	0	No cough
	1	Cough present
Fever	0	No fever
	1	Fever present
Weight_Loss	0	No weight loss
	1	Weight loss present
Night_sweats	0	No night sweats
	1	Night sweats present
Haemoptysis	0	No haemoptysis
	1	Haemoptysis present
DR_Coded	0	H Resistant
	1	R Resistant
	2	MDR
	99	Other Resistance
Eth_R	0	Ethionamide Sensitive
	1	Ethionamide Resistant
	99	Not tested
Eth_R_Binary	0	Not Ethionamide Resistant
	1	Ethionamide Resistant
Bloods_Risk	0	Normal or other results
	1	Severely anaemic, low Alb, low lymphocyte
New_YrGrp	0	2000-2005
	1	2006-2012
	2	2013-2015
	3	2016-2020
Disease_Site	0	XPTB
	1	PTB
	2	Combined PTB and XPTB
Albumin_Lvls	0	Normal
	1	Low
	2	High
Albumin_Binary	0	Albumin not low

	1	Low Albumin
AlbuminBinary_recode	.00	Albumin not low
	1.00	Low albumin
Lymphocyte_Binary	0	Other lymphocyte level
	1	Low lymphocyte level
Lymphocyte_Levels	0	Normal
	1	Low
	2	High
Anaemia_recode	.00	No Anaemia
	2.00	Anaemia
AnaemiaLevels_recode	.00	No Anaemia
	1.00	Mild Anaemia_2SD
	2.00	Severe Anaemia_5SD
LymphocyteBinary_recode	.00	Other level
	1.00	Low level