

Chapter 6

CANCER MORTALITY

Part of the data collection of the PBCRs involves visits to the municipal corporation units to collect information on reported cancer deaths. This includes visits to the vital statistics division as well.

The information on deaths so collected is compiled and matched with incident/morbidity data of all the days, months and years prior to the date of death of the individual. These constitute the matched deaths for that particular year. The unmatched deaths are included with that particular year's incident/morbidity data and constitute the category "Death Certificates Only" (DCO).

There are certain limitations in the collection of cancer mortality data. These include the system of registration of death and certification of the cause of death. Though, in the urban centres all deaths are generally registered, many times the required information is not completely available. This pertains to cause of death and when cancer is mentioned as a cause, the anatomical site of cancer is not mentioned and when that is mentioned the morphologic type is not stated. Because of this, it appears difficult to have a clear and complete picture of cancer mortality as opposed to cancer morbidity.

Further in the North East in general and places like Nagaland, Manipur in particular have a considerable proportion of tribal population in hilly areas where reporting of deaths to the concerned authorities could be even less. However, traditionally Mumbai has developed a relatively better system mainly because of the earlier Coroner's act.

Table 6.1 shows the number of incidence cases, number of mortality cases and Mortality to Incidence Ratio (M/I%) of all sites of cancers in the different registry areas. The M/I% was highest among males in Barshi Rural (71.8) and lowest in Delhi (13.2). Among females also Barshi Rural registry showed highest M/I% (67.2) and the lowest in Cachar District of Assam State (6.8).

Table 6.2 gives the crude, age adjusted and truncated mortality rates among different PBCRs. This showed a variation of crude mortality rate among different registry areas. In males it varied from 9.0 per 100,000 in Aurangabad to 92.5 per 100,000 in Aizawl District of Mizoram State. Among females it varied from 5.2 per 100,000 in Cachar District to 69.0 per 100,000 in Aizawl District of Mizoram State. The age adjusted mortality rates show a similar variation among the registries.

Table 6.3 gives the number of matched deaths, number of DCOs and total deaths.

Table 6.1: Number of Incident and Mortality Cases and Mortality-Incidence Percent (M/I%)

Registry	Male			Female		
	Incidence	Mortality	M/I%	Incidence	Mortality	M/I%
Bangalore (2008-2009)	6026	2161	35.9	7389	1923	26.0
Barshi Rural (2009-2010)	273	196	71.8	302	203	67.2
Barshi Expanded (2009)	797	292	36.6	968	269	27.8
Bhopal (2009-2010)	1487	542	36.4	1441	441	30.6
Chennai (2009)	2619	767	29.3	2796	632	22.6
Delhi (2008-2009)	15189	2001	13.2	13838	1455	10.5
Mumbai (2009-2010)	11091	5198	46.9	11773	4784	40.6
Cachar District (2009-2010)	1579	210	13.3	1263	86	6.8
Dibrugarh District (2009-2011)	1438	446	31.0	1050	231	22.0
Kamrup Urban District (2009-2011)	2508	729	29.1	1908	364	19.1
Manipur State (MR) (2009-2010)	1393	262	18.8	1478	195	13.2
<i>Imphal West District</i> (2009-2010)	377	65	17.2	418	69	16.5
<i>MR - Excl. Imphal West</i> (2009-2010)	1016	197	19.4	1060	126	11.9
Mizoram State (MZ) (2009-2010)	1376	798	58.0	1107	532	48.1
<i>Aizawl District</i> (2009-2010)	696	383	55.0	597	275	46.1
<i>MZ - Excl. Aizawl</i> (2009-2010)	680	415	61.0	510	257	50.4
Sikkim State (2009-2011)	627	280	44.7	585	236	40.3
Ahmedabad - Rural (2009-2010)	995	385	38.7	726	258	35.5
Ahmedabad - Urban (2009-2010)	4533	1159	25.6	3460	714	20.6
Aurangabad (2009-2010)	504	119	23.6	540	83	15.4
Kolkata (2008-2009)	5127	2445	47.7	4786	1944	40.6
Kollam (2009-2010)	3375	1744	51.7	3128	1176	37.6
Nagpur (2008-2009)	2047	405	19.8	2253	353	15.7
Pune (2009-2010)	2876	1169	40.6	3051	1170	38.3
Thiruvananthapuram (2009-2011)	2483	979	39.4	2649	741	28.0
Meghalaya (2010-2011)	1520	474	31.2	859	254	29.6
<i>East Khasi Hills</i> (2010-2011)	944	306	32.4	563	163	29.0
Tripura State (2010)	1051	401	38.2	785	256	32.6
Wardha (2010-2011)	760	362	47.6	822	333	40.5

Table 6.2: Crude (CMR), Age Adjusted (AAMR) and Truncated (TMR) Mortality Rate per 100,000

Registry	Male			Female		
	CMR	AAMR	TMR	CMR	AAMR	TMR
Bangalore (2008-2009)	28.1	42.4	56.7	27.5	37.3	61.7
Barshi Rural (2009-2010)	34.8	38.2	77.8	39.6	39.4	90.0
Barshi Expanded (2009)	12.7	15.0	32.1	12.6	14.7	36.9
Bhopal (2009-2010)	26.3	40.3	70.3	23.7	32.8	63.2
Chennai (2009)	31.5	34.2	52.3	26.6	28.0	52.8
Delhi (2008-2009)	10.1	16.7	28.1	9.0	12.9	24.9
Mumbai (2009-2010)	33.1	48.3	66.1	38.0	43.7	74.4
Cachar District (2009-2010)	12.2	17.3	33.3	5.2	6.7	15.1
Dibrugarh District (2009-2011)	21.8	31.2	54.5	11.8	16.8	33.0
Kamrup Urban District (2009-2011)	37.2	57.3	79.0	20.9	32.6	53.9
Manipur State (MR) (2009-2010)	10.2	14.6	24.8	7.6	10.6	21.5
<i>Imphal West District</i> (2009-2010)	12.9	17.2	27.2	13.3	16.0	24.5
<i>MR - Excl. Imphal West</i> (2009-2010)	9.6	13.9	24.2	6.2	9.0	20.6
Mizoram State (MZ) (2009-2010)	69.9	110.3	187.9	49.2	76.5	134.2
<i>Aizawl District</i> (2009-2010)	92.5	154.1	260.8	69.0	110.1	182.9
<i>MZ - Excl. Aizawl</i> (2009-2010)	57.0	87.7	150.2	37.6	57.8	108.2
Sikkim State (2009-2011)	24.7	38.1	52.5	23.9	39.5	69.1
Ahmedabad - Rural (2009-2010)	22.0	29.3	59.1	16.4	18.5	39.6
Ahmedabad - Urban (2009-2010)	22.4	30.3	54.4	15.7	18.1	38.9
Aurangabad (2009-2010)	9.0	14.5	26.1	6.8	9.5	14.6
Kolkata (2008-2009)	48.1	43.6	61.9	44.8	39.6	73.3
Kollam (2009-2010)	66.5	60.8	104.6	40.8	33.6	66.8
Nagpur (2008-2009)	16.1	19.3	36.0	14.7	16.4	35.2
Pune (2009-2010)	21.3	31.6	41.3	23.8	29.8	50.7
Thiruvananthapuram (2009-2011)	56.6	52.1	79.0	40.4	34.2	67.4
Meghalaya (2010-2011)	25.1	51.5	105.7	13.4	25.6	52.2
<i>East Khasi Hills</i> (2010-2011)	38.1	75.4	147.6	20.0	34.2	66.0
Tripura State (2010)	21.3	30.4	59.1	14.3	18.7	41.1
Wardha (2010-2011)	24.5	27.7	56.1	24.1	24.9	54.8

Table 6.3: Number of Matched Deaths (MD), Number of Death Certificates Only (DCOs) and Total Deaths (TD)

Registry	Male			Female		
	MD	DCOs	TD	MD	DCOs	TD
Bangalore (2008-2009)	1689	472	2161	1548	375	1923
Barshi Rural (2009-2010)	195	1	196	200	3	203
Barshi Expanded (2009)	290	2	292	268	1	269
Bhopal (2009-2010)	514	28	542	416	25	441
Chennai (2009)	669	98	767	549	83	632
Delhi (2008-2009)	1891	110	2001	1400	55	1455
Mumbai (2009-2010)	4717	530	5247	4274	554	4828
Cachar District (2009-2010)	81	129	210	30	56	86
Dibrugarh District (2009-2011)	191	255	446	118	113	231
Kamrup Urban District (2009-2011)	438	291	729	223	141	364
Manipur State (MR) (2009-2010)	254	8	262	187	8	195
<i>Imphal West District</i> (2009-2010)	60	5	65	66	3	69
<i>MR - Excl. Imphal West</i> (2009-2010)	194	3	197	121	5	126
Mizoram State (MZ) (2009-2010)	602	196	798	368	164	532
<i>Aizawl District</i> (2009-2010)	311	72	383	201	74	275
<i>MZ - Excl. Aizawl</i> (2009-2010)	291	124	415	167	90	257
Sikkim State (2009-2011)	237	43	280	203	33	236
Ahmedabad - Rural (2009-2010)	370	15	385	249	9	258
Ahmedabad - Urban (2009-2010)	1092	67	1159	645	69	714
Aurangabad (2009-2010)	101	18	119	67	16	83
Kolkata (2008-2009)	2010	435	2445	1592	352	1944
Kollam (2009-2010)	1560	184	1744	1027	149	1176
Nagpur (2008-2009)	339	66	405	310	43	353
Pune (2009-2010)	981	188	1169	975	195	1170
Thiruvananthapuram (2009-2011)	719	260	979	546	195	741
Meghalaya (2010-2011)	349	125	474	192	62	254
<i>East Khasi Hills</i> (2010-2011)	249	57	306	135	28	163
Tripura State (2010)	398	3	401	247	9	256
Wardha (2010-2011)	333	29	362	302	31	333