Additional file 5a: Numbers and proportion of physician agreement by stage of coding

	Initial		Reconciliation		Adjudication			
Cause of death	Agreement	%	Agreement	%	Agreement	%	Total	
Communicable								
Malaria	1378	65.9%	323	15.4%	390	18.7%	2091	
Tuberculosis	4620	80.4%	539	9.4%	588	10.2%	5747	
HIV/STI	352	76.5%	51	11.1%	57	12.4%	460	
Other infectious diseases	4272	60.8%	1336	19.0%	1424	20.3%	7032	
Maternal conditions	634	63.4%	246	24.6%	120	12.0%	1000	
Nutritional conditions	172	41.5%	112	27.1%	130	31.4%	414	
Non-communicable								
Cancer	3735	66.1%	1023	18.1%	891	15.8%	5649	
Heart diseases	5843	75.2%	949	12.2%	973	12.5%	7765	
Stroke	3452	65.1%	999	18.8%	855	16.1%	5306	
Other CVD	621	42.8%	383	26.4%	448	30.9%	1452	
Chronic respiratory disease	4235	71.7%	793	13.4%	882	14.9%	5910	
Cirrhosis of the liver	1695	55.2%	759	24.7%	615	20.0%	3069	
Other digestive diseases	641	41.2%	426	27.4%	489	31.4%	1556	
Renal and other endocrine diseases	1691	61.4%	545	19.8%	518	18.8%	2754	
Other chronic diseases	941	45.1%	588	28.2%	557	26.7%	2086	
Injury								
Road traffic accidents	1844	68.9%	549	20.5%	282	10.5%	2675	
Suicides	2276	68.9%	670	20.3%	355	10.8%	3301	
Other injuries	3091	60.5%	1191	23.3%	825	16.2%	5107	
Ill-defined conditions	2074	47.5%	780	17.9%	1514	34.7%	4368	
All	43567	64.3%	12262	18.1%	11913	17.6%	67742	

Additional file 5b: Number of records and CSMF by cause of death and stage of physician coding

Physician 1 initial code		Physician 2 initial code		Sum of initial codes		Aggregate (all stages**)			Final code				
No.	CSMF	Error*	No.	CSMF	Error*	No.	CSMF	Error*	No.	CSMF	Error*	No.	CSMF
1997	3.3%	-0.1%	1979	3.2%	-0.2%	3976	3.2%	-0.1%	5783	3.2%	-0.1%	2076	3.4%
5524	9.0%	-0.2%	5489	8.9%	-0.3%	11013	9.0%	-0.3%	13761	7.7%	-1.5%	5670	9.2%
435	0.7%	0.0%	423	0.7%	0.0%	858	0.7%	0.0%	1107	0.6%	-0.1%	434	0.7%
6721	11.0%	-0.3%	6547	10.7%	-0.6%	13268	10.8%	-0.5%	19970	11.2%	-0.1%	6918	11.3%
846	1.4%	-0.1%	847	1.4%	-0.1%	1693	1.4%		2695	1.5%	0.1%	889	1.4%
													0.6%
					51575			5.575			5.2,1		2.272
5331	8.7%	-0.2%	5320	8.7%	-0.2%	10651	8.7%	-0.2%	14967	8.4%	-0.5%	5449	8.9%
													12.2%
													7.3%
													1.1%
						_			_				8.9%
													4.0%
													2.3%
													4.0%
						_			_				2.7%
1722	2.070	0.170	1730	2.070	0.170	3432	2.070	0.170	0120	3.470	0.770	1002	2.770
1096	2 7%	0.1%	1000	2 7%	0.1%	2066	2 7%	0.1%	5525	2 10/	0.2%	2044	3.3%
													4.3%
													6.9%
													6.9% 7.4%
54/0	8.9%	1.0%	2231	9.1%	1./%	11061 122658	9.0% 100%	1.7%	1/814	10.0% 100 %	2.6% 10.58%	4520 61353	7.4% 100%
	No. 1997 5524 435 6721	No. CSMF 1997 3.3% 5524 9.0% 435 0.7% 6721 11.0% 846 1.4% 409 0.7% 5331 8.7% 7278 11.9% 4366 7.1% 726 1.2% 5506 9.0% 2397 3.9% 1415 2.3% 2413 3.9% 1722 2.8% 1986 3.2% 2564 4.2% 4209 6.9%	No. CSMF Error* 1997 3.3% -0.1% 5524 9.0% -0.2% 435 0.7% 0.0% 6721 11.0% -0.3% 846 1.4% -0.1% 409 0.7% 0.1% 5331 8.7% -0.2% 7278 11.9% -0.4% 4366 7.1% -0.2% 726 1.2% 0.1% 5506 9.0% 0.1% 2397 3.9% -0.1% 1415 2.3% 0.0% 2413 3.9% -0.1% 1722 2.8% 0.1% 1986 3.2% -0.1% 2564 4.2% -0.1% 4209 6.9% 0.0%	No. CSMF Error* No. 1997 3.3% -0.1% 1979 5524 9.0% -0.2% 5489 435 0.7% 0.0% 423 6721 11.0% -0.3% 6547 846 1.4% -0.1% 847 409 0.7% 0.1% 403 5331 8.7% -0.2% 5320 7278 11.9% -0.4% 7370 4366 7.1% -0.2% 4277 726 1.2% 0.1% 744 5506 9.0% 0.1% 5563 2397 3.9% -0.1% 2474 1415 2.3% 0.0% 1406 2413 3.9% -0.1% 2431 1722 2.8% 0.1% 1730 1986 3.2% -0.1% 2480 4209 6.9% 0.0% 4289	No. CSMF Error* No. CSMF 1997 3.3% -0.1% 1979 3.2% 5524 9.0% -0.2% 5489 8.9% 435 0.7% 0.0% 423 0.7% 6721 11.0% -0.3% 6547 10.7% 846 1.4% -0.1% 847 1.4% 409 0.7% 0.1% 403 0.7% 5331 8.7% -0.2% 5320 8.7% 7278 11.9% -0.4% 7370 12.0% 4366 7.1% -0.2% 4277 7.0% 726 1.2% 0.1% 744 1.2% 5506 9.0% 0.1% 5563 9.1% 2397 3.9% -0.1% 2474 4.0% 1415 2.3% 0.0% 1406 2.3% 2413 3.9% -0.1% 2431 4.0% 1722 2.8% 0.1% 1730	No. CSMF Error* No. CSMF Error* 1997 3.3% -0.1% 1979 3.2% -0.2% 5524 9.0% -0.2% 5489 8.9% -0.3% 435 0.7% 0.0% 423 0.7% 0.0% 6721 11.0% -0.3% 6547 10.7% -0.6% 846 1.4% -0.1% 847 1.4% -0.1% 409 0.7% 0.1% 403 0.7% 0.0% 5331 8.7% -0.2% 5320 8.7% -0.2% 7278 11.9% -0.4% 7370 12.0% -0.2% 726 1.2% 0.1% 744 1.2% 0.1% 7506 9.0% 0.1% 744 1.2% 0.1% 5506 9.0% 0.1% 2474 4.0% 0.0% 2413 3.9% -0.1% 2474 4.0% 0.0% 2413 3.9% -0.1%<	No. CSMF Error* No. CSMF Error* No. 1997 3.3% -0.1% 1979 3.2% -0.2% 3976 5524 9.0% -0.2% 5489 8.9% -0.3% 11013 435 0.7% 0.0% 423 0.7% 0.0% 858 6721 11.0% -0.3% 6547 10.7% -0.6% 13268 846 1.4% -0.1% 847 1.4% -0.1% 1693 409 0.7% 0.1% 403 0.7% 0.0% 812 5331 8.7% -0.2% 5320 8.7% -0.2% 10651 7278 11.9% -0.4% 7370 12.0% -0.2% 14648 4366 7.1% -0.2% 4277 7.0% -0.4% 8643 726 1.2% 0.1% 744 1.2% 0.1% 1470 5506 9.0% 0.1% 5563 9.1% <	No. CSMF Error* No. CSMF Error* No. CSMF 1997 3.3% -0.1% 1979 3.2% -0.2% 3976 3.2% 5524 9.0% -0.2% 5489 8.9% -0.3% 11013 9.0% 435 0.7% 0.0% 423 0.7% 0.0% 858 0.7% 6721 11.0% -0.3% 6547 10.7% -0.6% 13268 10.8% 846 1.4% -0.1% 847 1.4% -0.1% 1693 1.4% 409 0.7% 0.1% 403 0.7% 0.0% 812 0.7% 5331 8.7% -0.2% 5320 8.7% -0.2% 10651 8.7% 7278 11.9% -0.4% 7370 12.0% -0.2% 14648 11.9% 4366 7.1% -0.2% 4277 7.0% -0.4% 8643 7.0% 726 1.2% 0.1%	No. CSMF Error* No. CSMF Error* No. CSMF Error* 1997 3.3% -0.1% 1979 3.2% -0.2% 3976 3.2% -0.1% 5524 9.0% -0.2% 5489 8.9% -0.3% 11013 9.0% -0.3% 435 0.7% 0.0% 423 0.7% 0.0% 858 0.7% 0.0% 6721 11.0% -0.3% 6547 10.7% -0.6% 13268 10.8% -0.5% 846 1.4% -0.1% 847 1.4% -0.1% 1693 1.4% -0.1% 409 0.7% 0.1% 403 0.7% 0.0% 812 0.7% 0.0% 5331 8.7% -0.2% 5320 8.7% -0.2% 10651 8.7% -0.2% 7278 11.9% -0.4% 7370 12.0% -0.2% 14648 11.9% -0.3% 726 1.2% 0.1%	No. CSMF Error* No. CSMF Error* No. CSMF Error* No. 1997 3.3% -0.1% 1979 3.2% -0.2% 3976 3.2% -0.1% 5783 5524 9.0% -0.2% 5489 8.9% -0.3% 11013 9.0% -0.3% 13761 435 0.7% 0.0% 423 0.7% 0.0% 858 0.7% 0.0% 1107 6721 11.0% -0.3% 6547 10.7% -0.6% 13268 10.8% -0.5% 19970 846 1.4% -0.1% 847 1.4% -0.1% 1693 1.4% -0.1% 2695 409 0.7% 0.1% 403 0.7% 0.0% 812 0.7% 0.0% 1443 5331 8.7% -0.2% 5320 8.7% -0.2% 10651 8.7% -0.2% 14967 7278 11.9% -0.4% 7370 12.	No. CSMF Error* No. CSMF Error* No. CSMF Error* No. CSMF 1997 3.3% -0.1% 1979 3.2% -0.2% 3976 3.2% -0.1% 5783 3.2% 5524 9.0% -0.2% 5489 8.9% -0.3% 11013 9.0% -0.3% 13761 7.7% 435 0.7% 0.0% 423 0.7% 0.0% 858 0.7% 0.0% 1107 0.6% 6721 11.0% -0.3% 6547 10.7% -0.6% 13268 10.8% -0.5% 19970 11.2% 846 1.4% -0.1% 847 1.4% -0.1% 1693 1.4% -0.1% 2695 1.5% 409 0.7% 0.1% 403 0.7% 0.0% 812 0.7% 0.0% 1443 0.8% 5331 8.7% -0.2% 5320 8.7% -0.2% 10651 8.7% -0.	No. CSMF Error* No. CSMF Error* No. CSMF Error* 1997 3.3% -0.1% 1979 3.2% -0.2% 3976 3.2% -0.1% 5783 3.2% -0.1% 5524 9.0% -0.2% 5489 8.9% -0.3% 11013 9.0% -0.3% 13761 7.7% -1.5% 435 0.7% 0.0% 423 0.7% 0.0% 858 0.7% 0.0% 1107 0.6% -0.1% 6721 11.0% -0.3% 6547 10.7% -0.6% 13268 10.8% -0.5% 19970 11.2% -0.1% 846 1.4% -0.1% 847 1.4% -0.1% 1693 1.4% -0.1% 2695 1.5% 0.1% 409 0.7% 0.1% 403 0.7% 0.0% 812 0.7% 0.0% 1443 0.8% 0.2% 7278 11.9% -0.4% 7370 <td< td=""><td>No. CSMF Error* No. CSMF Error* No.</td></td<>	No. CSMF Error* No.

^{*}CSMF absolute error compared to final assigned codes

^{**} Including initial coding, reconciliation, and adjudication