

**Additional file 2 - Summary characteristics of reviewed validation studies**

No.	Setting	Period	Age group	Sample size	Causes of death	Interpretation method	Performance measures	Reference standard
1	Tanzania [28]	2000-2003	All	3123	All	PCVA	<ul style="list-style-type: none"> <li>• Sensitivity</li> <li>• Specificity</li> <li>• Agreement of CSMF</li> <li>• PPV</li> </ul>	Hospital-based deaths
2	China [29]	2002	Adult	2102	All	PCVA	<ul style="list-style-type: none"> <li>• Sensitivity</li> <li>• Specificity</li> <li>• Agreement of CSMF</li> <li>• PPV</li> </ul>	Hospital-based deaths
3	Thailand [30]	2006-2007	Adolescents and adults	2 558	All	PCVA	<ul style="list-style-type: none"> <li>• Sensitivity</li> <li>• PPV</li> <li>• Agreement of CSMF</li> </ul>	Hospital-based deaths
4	Mexico, Tanzania, India Philippines [31]	2005	All	12 542	All	PCVA	<ul style="list-style-type: none"> <li>• Average of cause-specific chance-corrected concordance</li> <li>• CSMFs accuracy</li> <li>• Relationship between estimated CSMFs and true CSMFs</li> </ul>	Hospital-based deaths
5	India [32]	1998-1999	Adults	48 357	All	PCVA	<ul style="list-style-type: none"> <li>• Agreement of CSMF</li> <li>• Sensitivity (only for cancer)</li> </ul>	Death certificates
6	India [33]	1997-1998	Adults	31 788	All	PCVA	<ul style="list-style-type: none"> <li>• Agreement of CSMF</li> </ul>	Various types of records
7	Uganda	2006-	Adults	264	HIV –related death	PCVA	<ul style="list-style-type: none"> <li>• Specificity</li> </ul>	Clinically-

No.	Setting	Period	Age group	Sample size	Causes of death	Interpretation method	Performance measures	Reference standard
	34]	2008					<ul style="list-style-type: none"> <li>• Agreement of CSMF</li> <li>• PPV</li> </ul>	confirmed HIV status
8	Uganda [35]	2008-2009	Children under 5	719	Malaria	PCVA	<ul style="list-style-type: none"> <li>• Sensitivity</li> <li>• Specificity</li> <li>• PPV</li> <li>• Agreement of CSMF</li> </ul>	Hospital-based deaths
9	Kenya [36]	2002-2008	All	1 823	All	InterVA-3	<ul style="list-style-type: none"> <li>• Kappa statistics</li> <li>• Agreement of CSMF</li> </ul>	PCVA
10	Burkina Faso [37]	1998-2007	All	5649	All	InterVA-3	<ul style="list-style-type: none"> <li>• Agreement of CSMF</li> </ul>	PCVA
11	Mexico Tanzania India Philippines [14]	2005	All	12 542	All	InterVA-3	<ul style="list-style-type: none"> <li>• Chance-corrected concordance</li> <li>• CSMFs accuracy</li> <li>• Linear regression</li> </ul>	Hospital-based deaths
12	South Africa [15]	1992-2005	All	1 000	All	InterVA	<ul style="list-style-type: none"> <li>• Agreement of CSMF</li> </ul>	InterVA-3
13	South Africa [38]	1992-2005	All	6,153	All	InterVA-3	<ul style="list-style-type: none"> <li>• Agreement of CSMF</li> </ul>	PCVA
14	Ethiopia [39]	2003	Adults	193	HIV/AIDS HIV/AIDS+ TB	InterVA-3	<ul style="list-style-type: none"> <li>• Sensitivity</li> <li>• Specificity</li> <li>• PPV</li> <li>• Agreement of CSMF</li> <li>• Kappa statistics</li> <li>• ROC curves</li> </ul>	Hospital-based deaths

No.	Setting	Period	Age group	Sample size	Causes of death	Interpretation method	Performance measures	Reference standard
15	Ethiopia [40]	2012	Adults	408	Pulmonary tuberculosis	InterVA-3	<ul style="list-style-type: none"> <li>• Sensitivity</li> <li>• Specificity</li> <li>• Agreement of CSMF</li> <li>• Kappa statistics</li> <li>• Receiver operating characteristic curves</li> </ul>	PCVA
16	Mexico Tanzania India Philippines [16]	2005	All	12 542	All	KL	<ul style="list-style-type: none"> <li>• CSMF accuracy</li> <li>• Linear regression</li> </ul>	Hospital-based deaths
17	Mexico Tanzania India Philippines [12]	2005	All	12 542	All	Tariff	<ul style="list-style-type: none"> <li>• Chance-corrected concordance</li> <li>• CSMF accuracy</li> <li>• Linear regression</li> </ul>	Hospital-based deaths
18	Mexico Tanzania India Philippines [13]	2005	All	12 542	All	SSP	<ul style="list-style-type: none"> <li>• Chance-corrected concordance</li> <li>• CSMF accuracy</li> <li>• Linear regression</li> </ul>	Hospital-based deaths
19	Mexico Tanzania India Philippines [11]	2005	All	12 542	All	RF	<ul style="list-style-type: none"> <li>• Chance-corrected concordance</li> <li>• CSMF accuracy</li> <li>• Linear regression</li> </ul>	Hospital-based deaths