

<b>Guideline Item</b>	<b>Status</b>	<b>Location in Report</b>
<b>Clinical need and intended use clearly defined</b>	✓ Complete	Section 1 (Background)
<b>Target population and clinical setting described</b>	✓ Complete	Sections 1, 6
<b>Data sources and acquisition methods documented</b>	✓ Complete	Section 2 (Data & Cohorts)
<b>Inclusion/exclusion criteria transparent</b>	✓ Complete	Section 2
<b>Handling of missing data explained</b>	✓ Complete	Section 3.1 (SimpleImputer with median imputation)
<b>Reference standard and label generation process</b>	✓ Complete	Section 2, 7.4 (NLP-derived labels with ~10% noise)
<b>Train/validation/test split clearly described</b>	✓ Complete	Section 2 (patient-level separation)
<b>Prevention of data leakage</b>	✓ Complete	Section 3.1 (SMOTE within CV folds, not before)
<b>Model architecture and hyperparameters</b>	✓ Complete	Section 3 (all subsections with detailed configs)
<b>Training procedures detailed</b>	✓ Complete	Section 3 (including failed and successful approaches)
<b>Evaluation metrics predefined</b>	✓ Complete	Section 4 (AUROC, AUPRC, F1, precision, recall)
<b>Performance metrics for all models</b>	✓ Complete	Section 5.1 (comprehensive comparison table)
<b>Calibration analysis</b>	✓ Complete	Section 5.6 (ECE by subgroup for FM model)
<b>Robustness testing</b>	✓ Complete	Section 5.5 (Gaussian noise perturbation testing)

<b>Fairness analysis across subgroups</b>	✓ Complete	Section 5.3 (detailed analysis by AP/PA view type)
<b>Fairness mitigation strategies</b>	✓ Complete	Section 5.3 (SMOTE for ML; loss re-weighting attempted for DL with documented failure)
<b>Explainability methods applied</b>	✓ Complete	Section 5.4 (Grad-CAM for DL, SHAP for ML)
<b>External validation</b>	x Not done	Acknowledged as critical limitation (Sec 7.4)
<b>Comparison with clinical standard of care</b>	x Not done	No radiologist comparison (noted in Sec 7.4)
<b>Clinical deployment context specified</b>	✓ Complete	Section 6 (assistive tool with detailed use cases)
<b>Assistive vs autonomous scope clarified</b>	✓ Complete	Section 6.1 (explicitly assistive, never autonomous)
<b>Guardrails and safety mechanisms</b>	✓ Complete	Section 6.1 & 6.4 (notification-only, subgroup monitoring, user control)
<b>Operational metrics (latency, cost)</b>	✓ Complete	Section 5.5 (P95 latency, cost per 1k images)
<b>Energy efficiency considerations</b>	✓ Complete	Section 5.5 (Wh per image for all models)
<b>Limitations clearly stated</b>	✓ Complete	Section 7.4 (10 detailed limitations)
<b>Failure modes analyzed</b>	✓ Complete	Sections 5.2, 5.3, 7.2, 7.3, 9 (MedCLIP failure, mitigation failure)
<b>Monitoring and incident response plan</b>	✓ Complete	Section 7.6 (algorithm vigilance with triggers)
<b>Code and data availability</b>	✓ Complete	Code available (Jupyter notebook); data is public MIMIC-CXR