

HIGH FLOW OXYGEN THERAPY IN GENERAL PAEDIATRIC WARDS

AIM

- To develop an evidence-based protocol for the use of high flow oxygen therapy (HFOT) in paediatric wards at district hospitals in the Kwa-Zulu Natal (KZN) province
- To guide medical staff on safe application of HFOT

BACKGROUND

- In KZN, pneumonia remains the second cause of deaths in children <5 years outside the neonatal age
- Respiratory support modalities at district hospitals are limited
- HFOT potentially reduces the rate of intubations^{2,3}
- HFOT has been used in remote areas without intensive care unit support, it is safe with fewer complications^{1,3}

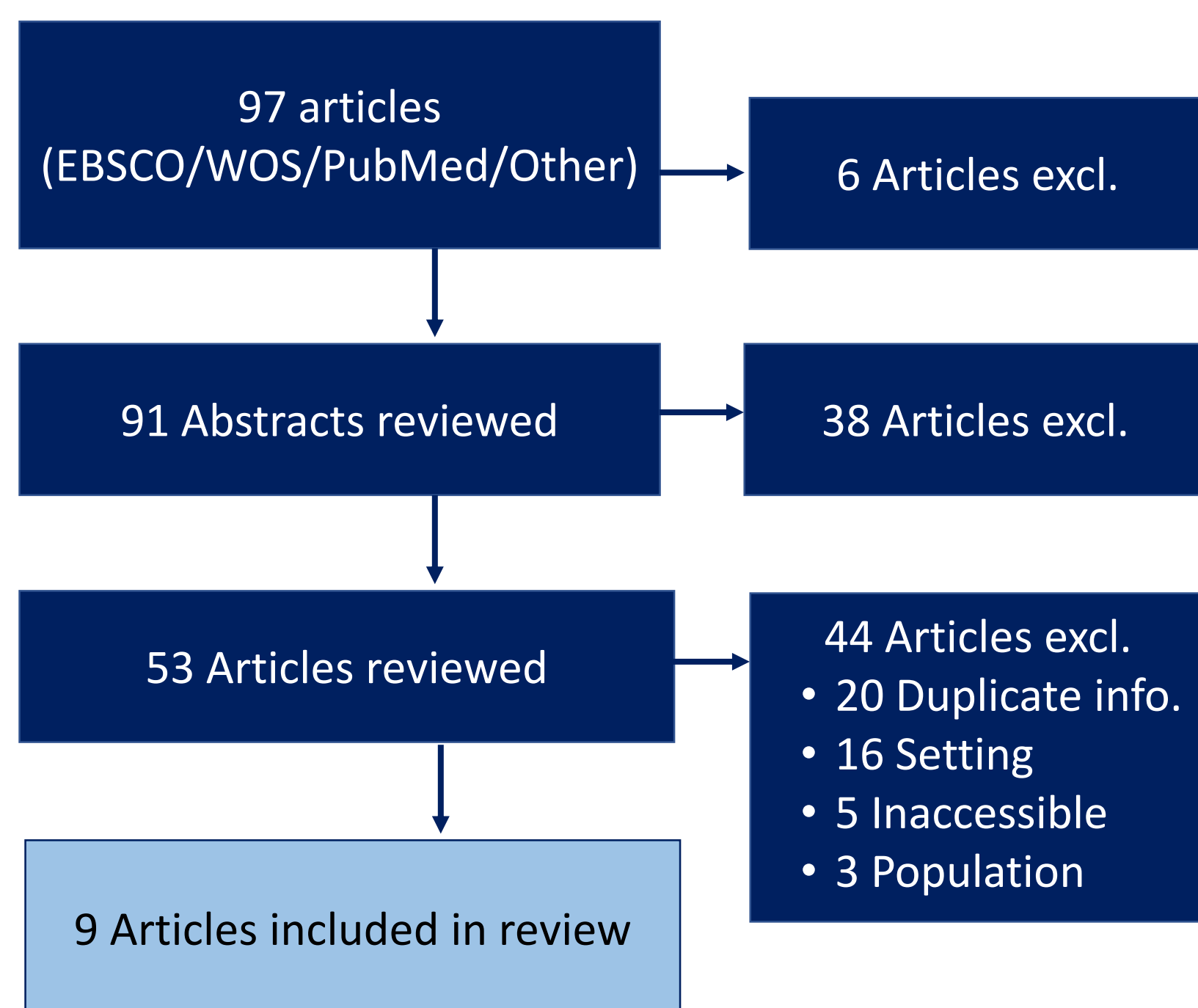
BENEFITS OF HFOT

- Provides warm humidified air which thins secretions thereby increasing patient comfort³
- Improves partial pressure of oxygen and carbon dioxide resulting in reduce work of breathing³
- Generates positive airway pressure, resulting in end expiratory pressure effect thereby increasing functional residual capacity³
- Washout of upper-airways reduces dead space³
- Decreases entrainment of room air = increased inspired fraction of inspired oxygen

LIMITATIONS OF HFOT

- Variable pressures generated are not quantifiable
- Flows of 2L/kg/min can result in very high flow rates for younger children³.
- HFOT may mask early signs of deterioration^{1,3}

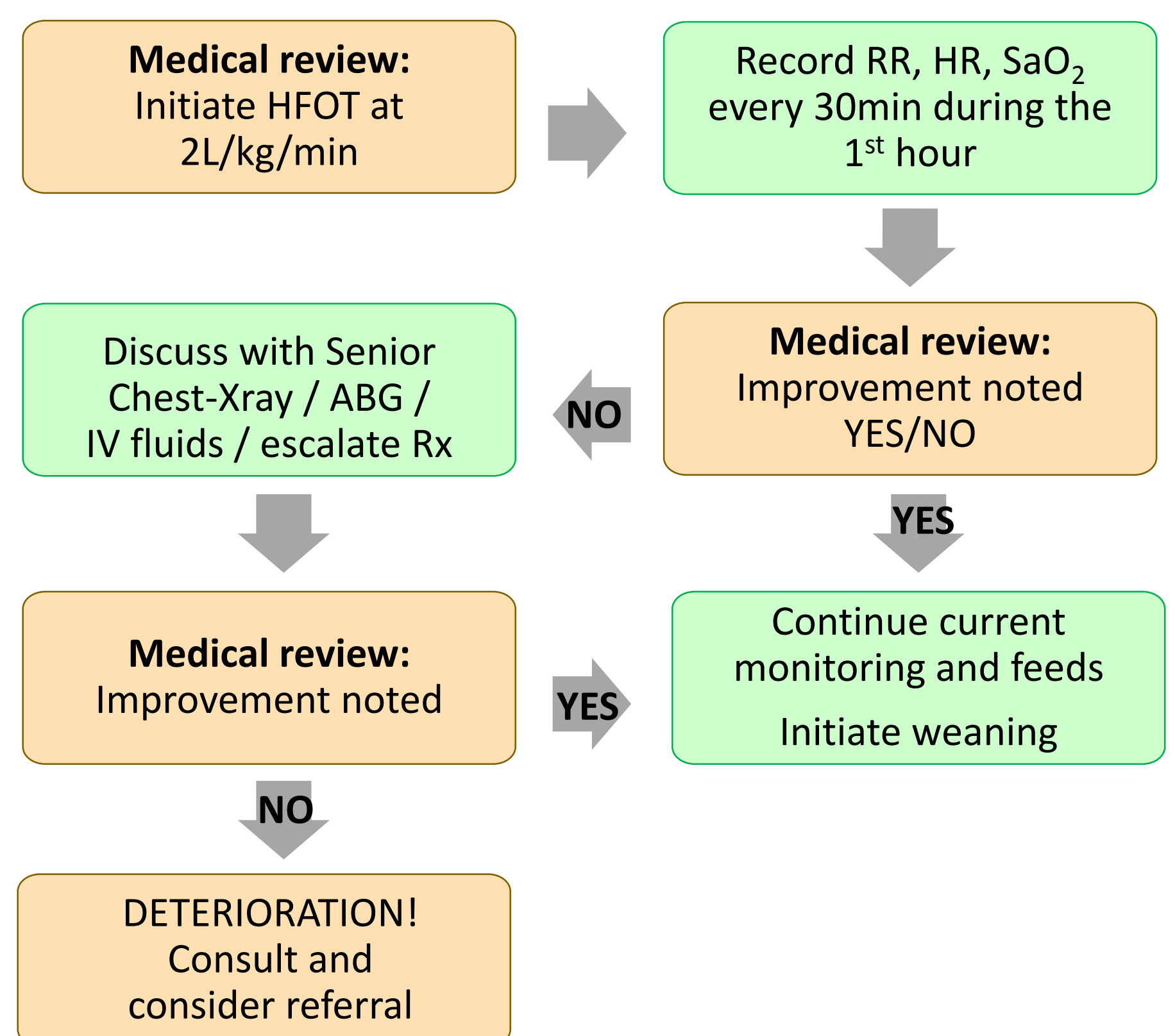
METHODOLOGY



Keywords: HFOT, children, paediatric ward

- Scope review done to map the relevant evidence
- Search terms & electronic search strategy created with the assistance of a librarian. Results from databases attained
- Summary synthesis was created from final studies selected
- Three clinical guidelines on HFOT identified and appraised using the AGREE II Instrument
- The guideline with highest rating was adapted for use
- Recommendations formulated using appraised guideline and summary synthesis
- An evidence-based practice protocol was developed

PROTOCOL SUMMARY



SUMMARY

- There is little evidence on the use of HFOT outside the intensive care unit setting
- The patient's response to HFOT during the first hour will determine outcome¹
- True predictors of failure of HFOT are not known
- HFOT should not delay intubation if decompensation is suspected¹
- To date, there is no trial on whether to start with HFOT or to use when other respiratory care modalities fail