Smith 2011

* Device:  
  wearable oxygen mask (Respir8)
* Patients:  
  postoperative recovery patients
* Comparision:  
  Respir8 vs manual counts
* Method:   
  Reference: Observer 1 was counting for 1 minute, touching the chest of the patients as well, without seing the Respir8 monitor  
  Index: Respir8 readings were recorded every 15 seconds by Observer 2

Measurements were recorded with the same method after 10 minutes

* ±2 breaths/minute was the “acceptable” limit (this value was based on an unpublished volunteer study)
* 220 patients completed the study

Lee 2015

* Device:  
  wearable silicon, when bent, produces a signal (RespiraSens)
* Patients:  
  patients admitted to the post anaesthesia care unit
* Comparision:  
  RespiraSense vs ECG-derived respiratory rate  
  RespiaSense vs manual counts
* Method:  
  Reference: respiratory rate was observed by the nursing staff every 5 minutes, but no specific info on the duration of this measurement (blinded to the RespiraSense monitor)  
  ECG-derived measurements: no specific info

Index: RespiraSense: continuous monitoring for 15 minutes

* ±3 breaths/minute was considered clinically relevant (because of EWS score)
* Sample size calculated to be: 31 subjects
* 48 patients >> 144 recorded data points

Goldfine 2024

* Device:  
  conactless respiratory monitor which detects chest wall movements (P440)
* Patients:  
  cohort of emergency department patients
* Comparision:  
  p440 vs manual counts  
  p440 vs ECG-derived respiratory rate
* Method:  
  Reference: manual counts were recorded every 15 minutes

ECG-derived respiratory rates were recorded every 15 minutes

Index: continuous monitorizaion for 2 hours

* ±2 breaths/minute was the “acceptable” limit (no reason was mentioned for this)
* 14 participants were enrolled

Subbe 2018

* Device:  
  wearable silicon, when bent, produces a signal (RespiraSens)
* Patients:  
  patients admitted to the acute medical unit for at least 24 hours
* Comparision:  
  RespiraSense vs manual counts  
  RespiraSense vs capnography
* Method:  
  Reference: observer counted for 1 minute, every 15 minutes, as well as capnography
* Index: RespiraSense measured respiratory rate was averaged over a rolling 15-minute window
* ±3 breaths/minute was considered clinically relevant (no reason mentioned)
* Data from 17 patients were analyzed (62 datapoints) - sample size was calculated from a previously unpublished study

Singh 2020

* Device:  
  wearable device, which gives a signal as the skin streches (VCSEL)
* Patients:  
  patients at general wards, diagnosed with pulmonary diseases
* Comparision:  
  VCSEL vs manual counts
* Method:  
  Reference: 1 trained observer counted in 1-minute intervals, for 5 minutes – all in all 4 manual counts were recorded under this 5 minutes
* Index: VCSEL respiratory rates were recorded in 60-second windows (concurrently with the manual counting)
* sample size was calculated using a 1 sample, 2-sided t test
* 82 patients were selected for analysis