Every respiratory measure matters

Respiratory rate is the best early indicator of patient deterioration…

Every breath counts

3–5 more breaths/min. is an early sign of respiratory distress[1]

Respiratory rate is a predictor of cardiac arrest in hospital wards even the 1st time it reaches 27 breaths /min. within a 72 hr. period[2]

When respiratory rate is 25–29 breaths/min., mortality rate is 21%[3]

The most common reasons for return to the ICU[5]

48%	16%	13%
Respiratory insufficiency/ failure	Cardiac events	Neurological events

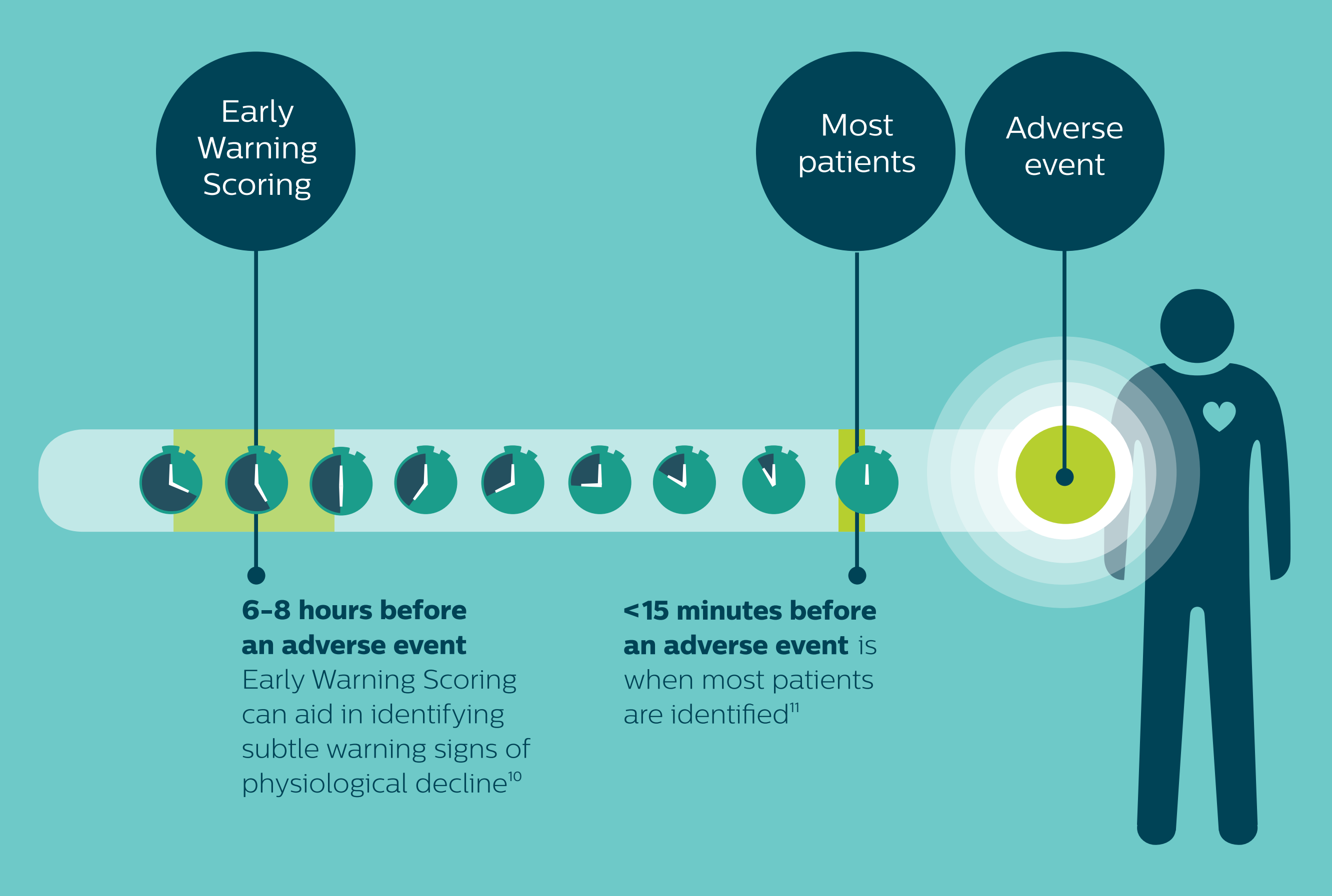
…but it is often **measured inconsistently, incorrectly and infrequently**

A recent survey of general care nurses revealed:

- Oxygen saturation is **relied on 60% of the time to evaluate respiratory dysfunction**[5]
- **57% of respondents perceived blood pressure change** to be the first indicator of deterioration[6]
- Respiratory rate was the **only parameter recorded less than 50% of the time**[7]
- **27.4% of respondents indicated that they make quick estimates** of the respiratory rate[8]

Early detection is vital

66% of cardiac arrest **patients show abnormal signs and symptoms up to 6 hours prior to cardiac arrest** but physicians are only notified 25% of the time[9]



6–8 hours before an adverse event Early Warning Scoring can aid in identifying subtle warning signs of physiological decline[10]

<15 minutes before an adverse event is when most patients are identified[11]

The power to prevent the 3rd leading cause of death in the United States*

is in the measurements we take

440,000 The number of preventable adverse events that contribute to patient deaths in U.S. hospitals every year.[12]

3rd to Heart disease (#1) and Cancer (#2)[13]

Equivalent to **two 747s** crashing every day every year[14]

63% of preventable deaths are attributed to failure to rescue by a registered nurse or physician[15] FTR

* Makary Martin A, Daniel Michael. Medical error—the third leading cause of death in the US BMJ

Sustainable, quality care in general care

is an imperative

17% of patients admitted to medical surgical wards will experience post-operative serious adverse events[16]

180/1000 patients develop abnormal vital signs[17]

For those 180 patients, **risk of 30 day mortality is 3x greater**

And nurses are unaware there are **abnormal vital signs in 90 of them**

90/1000 patients are at greater risk for 30-day mortality because early signs of deterioration are undetected.

Increasingly more difficult

More patients

2018

2050

67%

By 2050, the number of hospitalizations will increase by 67%[18]

Sicker patients

a little over **3/5ths** in healthcare spending is spent on people with **multiple chronic conditions** (MCC)[19]

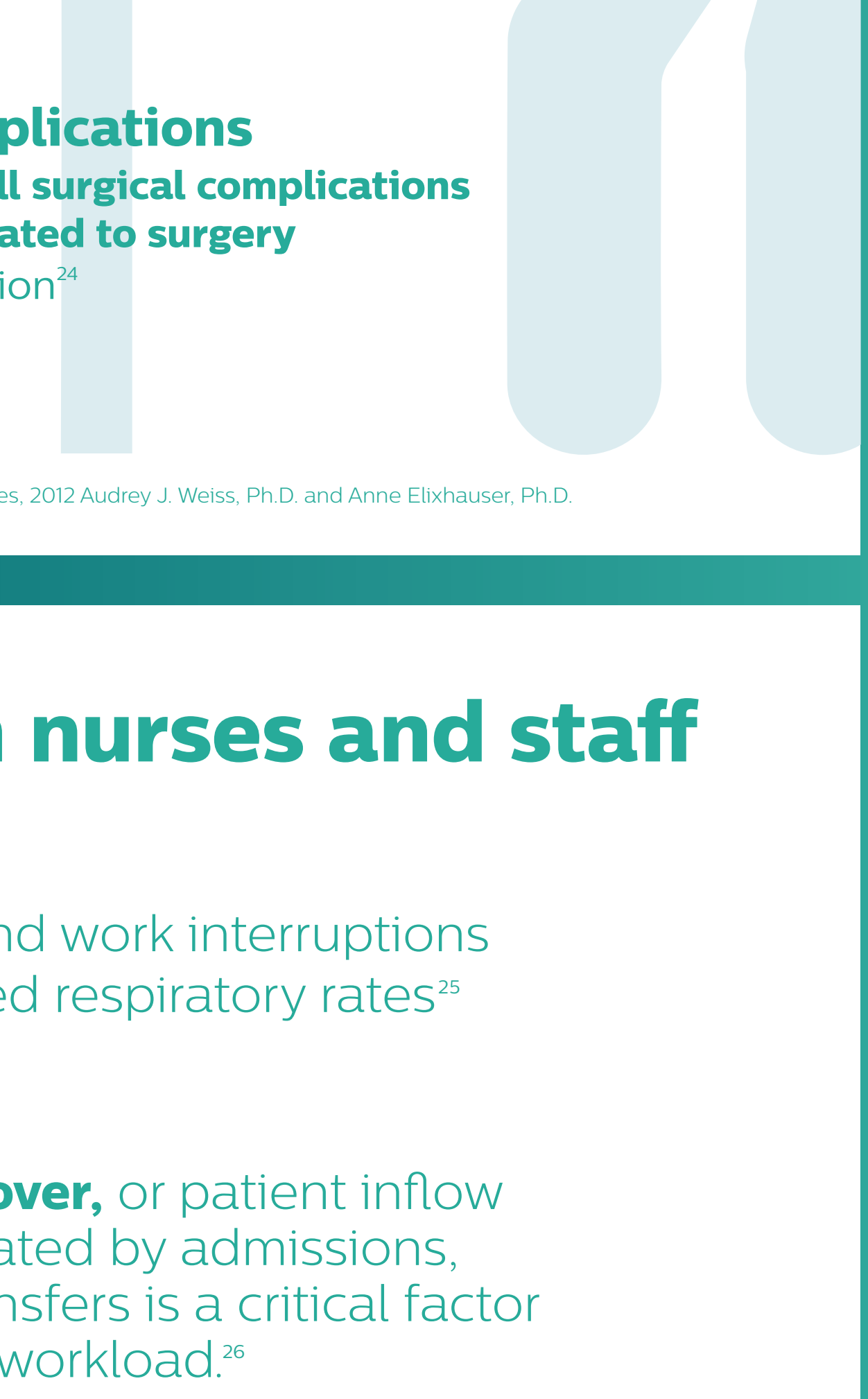
79% of inpatient stays are for patients with chronic conditions[20]

Increasing number of patients with more complex health problems who are **far more likely to become seriously ill during their admission**[21]

Between 2000–2030 the number of Americans with **chronic conditions will increase by 37%, equivalent to 46M Americans with MCC**[22]

Three in four **Americans 65+ have MCC**[23]

Older patients



35% of all hospital visits are for patient's 65+* even though there was a 4% drop in hospitalizations for the age group from 2008–2012

$14.3M spent per year for medicare hospital stays*

Respiratory complications contribute to **40% of all surgical complications** and **20% of deaths related to surgery** in the geriatric population[24]

* HCUP, October 2014 Overview of Hospital Stays in the United States, 2012 Audrey J. Weiss, Ph.D. and Anne Elixhauser, Ph.D.

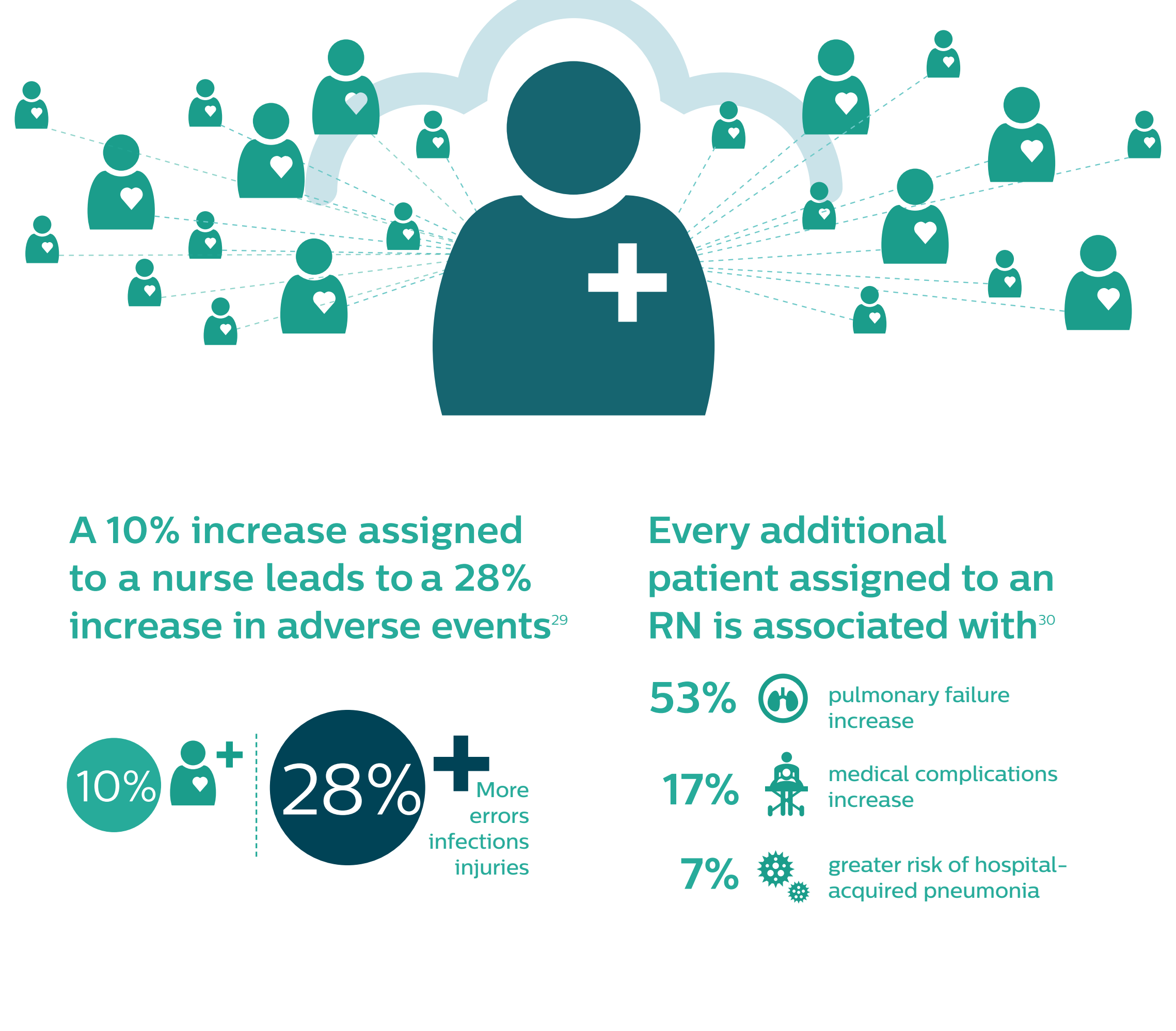
More pressure on nurses and staff

Time pressures and work interruptions contribute to missed respiratory rates[25]

High patient turnover, or patient inflow and outflow generated by admissions, discharges and transfers is a critical factor increasing nursing workload.[26]

As patient turnover increases, **failure-to-rescue also increases**[27]

High patient turnover is associated with **increased mortality**[28]



A 10% increase assigned to a nurse leads to a 28% increase in adverse events[29]

10% → 28% More errors infections injuries

Every additional patient assigned to an RN is associated with[30]

53%	pulmonary failure increase
17%	medical complications increase
7%	greater risk of hospital-acquired pneumonia

Better respiratory monitoring practices are more important than ever

Raising awareness of the importance of respiratory monitoring in non-critical care units and making it part of your standard of care can help end preventable deaths.

Spread the word – every better respiratory measure makes a difference.

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