A recent report [2] generated out of London by the National Health Service (NHS) paints a grim picture about systemic failings in healthcare of the sickest patients, those requiring acute oxygen and breathing assistance (or non-invasive ventilation (NIV)). Also known as basic or fundamental life support.

Citing high mortality rates —more than one in three died— due to sub-standard practices, The National Confidential Enquiry into Patient Outcome and Death. Inspiring Change [2] reveals the sad reality of care quality reduction when resources limit appropriate staffing and equipment supply for ever increasing patient volumes. The care was rated as less than good for every four out of five cases.

It isn’t rocket science. Stretching sometimes inadequately prepared staff beyond the scope of their individual training, under-supplying vital lifesaving materials and perpetuating poor nurse to patient ratios translates to diminished quality of care and, ultimately, higher costs— from financial to moral ones.

Penny-wise, pound foolish policy measures are complicit in these results. Because there is such an immense litany of issues identified, unpacking the entire study is not possible for the purpose of this article. So, here are a few of their tragic findings in bold with my commentary:

- **Supervision of care and patient monitoring were commonly inadequate**

This is because assessing a patient in respiratory distress requires way more than one order placed and one task accomplished. It is a dynamic and fluid moment-to-moment, complex involvement that necessitates comprehensive understanding of shifting oxygenation status with each ventilator adjustment obviating repetitive blood draws—or blood gas monitoring— and
interpretation of laboratory and changing clinical data which takes time to process. And balancing other organ systems, medications, disease states etc. Continuous vital signs \cite{3} and management decisions based on who demands (and when) aggressive or less invasive oxygen delivery requires critical thinking.

Level of expertise present at the bedside matters.

Imagine this simultaneous responsibility for an excessive number of patients with spotty support structures, equipment and the need for endless, extraneous data entry. Not a great recipe for superior care.

- **Case selection for NIV was often inappropriate and treatment was frequently delayed due to a combination of service organization and a failure to recognize that NIV was needed**

Translation: There are too many patients per provider and staffing level of expertise is variable and poorly assigned. Noticing a theme? Insufficient distribution of necessary devices for safe and effective monitoring was commonplace. For example:

- Just under half of hospitals (48.8\%) had a defined ratio of nurses to NIV patients as recommended
- (45.4\%) hospitals had staff without a defined competency who supervised patients receiving NIV
- Continuous oxygen saturation monitoring was not universally available, nor was continuous ECG (eg. electrocardiogram) monitoring in the most acute medical units or high respiratory care areas

- **National NIV audits over the last three cycles have shown worsening mortality rates, rising most recently to 34\%... mortality rate from the overall cohort of patients 35.3\%. When NIV was initiated in the first 24 hours of admission, mortality was 25.1\%. If it was used at a later stage of the admission, the mortality in this group was 55.4\%**.

The report indicates “a key study in 2000 demonstrated the effectiveness of NIV delivered by nursing staff on respiratory wards in the UK. NIV reduced mortality from 20\% to 10\% when compared to standard care.” Due to chronic obstructive pulmonary disease (COPD) contributing to 25\% of deaths from lung disease in the UK (fifth leading cause of death there), being responsible for 115,000 emergency room visits each year and is the second most likely reason for hospitalization, this mortality trend is particularly disturbing since this condition most frequently needs NIV (1).

The document goes on to discuss the problems with delayed care and insufficient escalation of treatment services to critical care levels of intervention. It underscores recommendations for change must focus on how services are organized so that the appropriate personnel are accessible and correctly placed.

- **(86.7\%) hospitals had a named medical clinical lead for their NIV service. In 66.3\% of the hospitals, the lead consultant had no specific time allocated in their job plan to lead the service.**
Because they were likely over scheduled for inane administrative tasks that have nothing to do with patient care or the practice of medicine! Enough said.

My prescription…

My prescription hasn’t changed. Make highest quality of care of at least equal import to access in the healthcare discussion and watch long and short-term financial and ethical gains materialize. Free up physician and caregiver time by unburdening them of the exorbitant, wasteful billing and data entry demands that have no relation to patient care and quality will skyrocket. When it does, lives and dollars are saved.

Understaffing with escalating patient volumes has become the trend of pushing providers beyond the “top of their ticket.” It is a myopic policy plan that routinely yields futile results. Poor staffing shortens and ends lives. See To Survive The Hospital, Make Sure Your Heart Stops On A Weekday [4] and Will More Nursing And Optometrists Lead To Erosion Of Patient-Centered Medicine? [5]

Return common sense to the mix. Simplify. For instance, when a newborn is being admitted or that trauma victim in the emergency room, create ways to bypass mandatory suicide prevention documentation platforms in electronic medical records. Let doctors be doctors. Stripping them of their autonomy has led to major morale shifts and burnout. To appreciate the inane scope of such excessive requirements, review Government ‘Torture’ of Physicians: Where’s the Outrage? [6] where I address the ballooning of mandated billing codes to over 68,000. That article will make you laugh (and cry).

With the ever fragmenting nature of health care systems has come a loss of continuity of care. Keeping your doctor has become a phrase wrought with politics. Taking the politics out of it, it is well-documented that continuity of care in the primary and general practice spheres reduces medical error, emergency room visits and hospitalizations. Review Unhealthiest Reality of Obamacare: Lack of Doctor Choice [7] and Hospital-Based Practices Do Worse Than Physician-Owned Ones. [8]

UPDATE (8/11/17): To give a frame of reference for use of NIV and mortality in the COPD population in the United States, refer to this study as a helpful resource Comparative Effectiveness of Noninvasive and Invasive Ventilation in Critically Ill Patients with Acute Exacerbation of COPD [9]. (IMV=invasive mechanical ventilation).

“Hospital mortality was 7.4% for patients treated with NIV; 16.1% for those treated with IMV…The receipt of NIV was associated with lower ICU and hospital mortality compared to the receipt of IMV (3.1% vs 10.5% and 7.4% vs 16.1% respectively)…” as per the thirty-eight hospitals participating in the Acute Physiology and Chronic Health Evaluation (APACHE) database from 2008 through 2012 published here: Crit Care Med. 2015 Jul; 43(7): 1386–1394. [10]

Source(s):

(1) The National Confidential Enquiry into Patient Outcome and Death. Inspiring Change [2]