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CONGRESS **REPORTS**

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OPENING KEY SESSION: GLOBAL CHALLENGES IN HEALTH CARE

Speakers: Dr. Linda Aiken, Prof. Anne Marie Rafferty and Naseer Ahmad
Report written by Dr. Elena Conde Montero

Nursing´s impact on patient outcomes

Linda Aiken (Pennsylvania, United States)

The first question is: Why don't proven clinical interventions have their intended outcomes? There is no direct relation between interventions and outcomes. However, it has been described that several patient outcomes are associated with Patient-to-Nurse Staffing Ratios:

- Mortality
- Failure to rescue
- Patient safety
- Sepsis and sepsis survival
- Hospital associated infections
- Falls with injuries and pressure ulcers
- Outcomes of hospital resuscitation
- Readmissions
- Length of hospital stay
- ICU utilization
- Patient satisfaction
- Nurse job satisfaction, burnout

Recent USA data show that 63% of the nurses work in a chaotic environment (Reports from RNs in 357 USA hospitals, 2021).

So, what is the problem to solve?

- Research shows that unfavorable clinician wellbeing does not "cause" poor patient outcomes.
- Poor clinical outcomes and unfavorable patient outcomes are both explained by poor nurse staffing and work environment.
- Clinicians are openly hostile to resilience training and other interventions focused on improving their adjustment to poor conditions.

And what are the implications for Practice and Research?

- A large research literature shows that effective clinical interventions are necessary but not sufficient to produce the best patient outcomes under prevailing conditions in many care settings.
- Prevailing conditions in care environments must be modified.
- Clinical practice conditions are modifiable if clinicians and researchers include labor metrics and work environment measures along with clinical metrics in quality audits to provide evidence to inform management and health policy interventions to improve patient outcomes.

Nurses as agents of care

Anne Marie Rafferty (London, United Kingdom)

The main message of the talk is that shortage of nurses should be treated as a global health emergency. It highlights the conclusions of a paper that in 2019 took the 70th Anniversary of the National Health Service (NHS) in the United Kingdom as an opportunity to reflect upon the strategic direction of nursing policy and the extent to which nurses can realise their potential as change agents in building a better future for health care (*Nurses as change agents for a better future in health care: the politics of drift and dilution. Health Econ Policy Law*. 2018;13(3-4):475-49). It argues that the policy trajectory set for nursing at the outset of the NHS continues to influence its strategic direction, and that the trajectory needs to be reset with the voices of nurses being more engaged in the design, as much as the delivery, of health policy. There is a growing evidence base about the benefits for patients and nurses of deploying well-educated nurses at the top of their skill set, to provide needed care for patients in adequately staffed and resourced units, as well as the value that nurses contribute to decision-making in clinical care. Yet much of this evidence is not being implemented. On the contrary, some of it is being ignored. Policy remains fragmented, driven by short-term financial constraints and underinvestment in high quality care. Nurses need to make their voices heard, and use the evidence base to change the dialogue with the public, policy makers and politicians, in order to build a better future for health care.

Studies are needed to know more about the role of professional judgement in staffing methodologies, or its contribution to decision-making, such as the one that has been made in England and Wales. The summary of findings of this study are:

- Despite national policy differences in England and Wales, the role of professional judgement in nurse staffing systems followed a common pattern.
- Two kinds of professional judgement were deployed in nurse staffing systems: the judgement of clinical nurses and the judgement of senior nurse managers.
- Nurse staffing systems comprised: an operational system (managing daily fluctuating capacity and demand) and a strategic system (establishment setting).
- Nurses' professional judgement was central to the generation of data, its interpretation and conceptualisation.
- Healthcare organisations relied on the professional judgements of clinical nurses and senior nurse managers in making operational decisions to mitigate risk, where real-world understanding of the status of the organisation was privileged over formal data.
- Nurses expressed concerns that formal measurement systems did not capture important aspects of care quality or staff wellbeing, which made it difficult to articulate their professional judgement for the purposes of workshop planning.

Using a 'whole systems' approach to enable wound care to be prioritised when resources are tight. The journey of Manchester to M.A.R.S.

Naseer Ahmad (Manchester, United Kingdom)

Dr Ahmad is the Clinical Director of the Manchester Amputation Reduction Strategy (M.A.R.S.).
1000 lower limb amputations were performed annually in Greater Manchester (GM), of which half were preventable. The path to an amputation begins with an ulcer that is inadequately treated in people with diabetes, peripheral arterial disease, venous disease and lymphoedema. Programs to reduce amputations normally focus on diabetic patients, but 50% of amputations occur in non-diabetic patients.
M.A.R.S. aims to reduce major limb amputations across GM. This is achieved through the development and implementation of a commissioning strategy designed to prevent, manage, and heal chronic foot and leg ulcers faster. Existing resources are redistributed to create a single community referral pathway, a coordinated lower limb management pathway and specialist wound care teams (podo-vascular assessment and treatment, ultradistal complex surgeries, "lifestyle clinics" for prevention). The strategy is informed by a 'whole systems analysis' and deep dive service review to ensure population-based service transformation.

The plan is to:

- Reduce inequity in service provision and outcomes by harmonising protocols and establishing the so-called "vascular tube map" with integrated pathways between community care and hospital setting.
- Improve communication between health professionals and patients through technology and in the "same language".
- Make patients "move more" and improve their lifestyle.
- Diagnose more, with nursing education.

In summary, the M.A.R.S. plan is based on the principle that an amputation is the culmination of a number of steps, and therefore that each phase, in the iceberg of disease leading to an amputation, requires an intervention. It is equally important to improve care and reduce costs, by both preventing and aggressively healing chronic ulcers.

WHAT CAN WE DO TO IMPROVE SUSTAINABILITY IN WOUND CARE?

Speakers: Alberto Piaggesi chaired this interactive session between 3 experts on different fields (translational research, plastic surgery, and law): Alexandra Marques, Franco Basseto and Giuseppe Turchetti
Report written by Dr. Elena Conde Montero

Translational research

Alexandra Marques (Portugal)

Regarding sustainable technologies, biodegradable materials should be used. However, extracting biodegradable materials from the nature may involve non-eco-friendly processes. Moreover, biodegradable materials may need a long process of several years to be completely degraded. It is important to know the carbon print of each material. For example, 3D printing could minimize the waste, and package with biodegradable materials could also reduce the waste.
On the other hand, non-biodegradable materials that are efficient could be beneficial when evaluated in a joint manner.

Plastic surgery

Franco Basseto (Padua, Italy)

Avoiding recurrence should be the most important endpoint in decision-making and research in wound healing. Sustainability variables are not included in randomised control trials (RCTs), and projects on new technologies do not include rules on sustainability.
Lots of waste material are produced daily in the hospital, including plastics, which is not adequately managed.
We should invest on home care, such as telemedicine, to improve sustainability and support patient-centred strategies.
It must be taken into account that bureaucracy is not helping sustainability.

Law

Giuseppe Turchetti (Italy)

Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
The relation between innovation and sustainability is not easy from an economical point of view. Technologies create "chronic patients", and this could be considered a threat for sustainability, with the consequent associated costs.
Papers dealing with economic assessment are normally cost analysis, so they are weak studies. They should focus on cost-utility, including quality of life. This affects the reimbursement of new technologies and consequently, it delays the introduction of new devices.

True innovation has to prove its safety, cost-effectiveness and sustainability. Sustainability should not be considered a constraint but a goal, and should be included at the beginning of the process. The life cycle of the product should be taken into account.

LOOKING AT THE PERILESIONAL SKIN

Speaker: Sara Sandroni (Tuscany, Italy)
Report written by Dr. Elena Conde Montero

The management of perilesional skin

The Triangle of Wound Assessment remains a fundamental tool for a holistic assessment including the patient, their wound, wound edges and perilesional skin.
It identifies three distinct, yet interconnected, zones or axes, which call for different approaches:

- Wound bed: look for signs of granulation tissue, while seeking to remove dead or devitalised tissue, manage exudate level and reduce the bioburden in the wound.
- Wound edge: lower barriers to wound healing by reducing undermining for dead space, debriding thickened or rolled edges, and improving exudate management to minimise risk of maceration.
- Periwound skin: rehydrate dry skin and avoid exposure to exudate/moisture to minimise the potential for damage.

The cause, duration, and status of the wound, together with any biopsychosocial factors that may impede healing should be also taken into account.
This tool highlights that perilesional skin is a key player in wound healing and maceration. Indeed, excessive exudate may be a barrier to complete closure. In fact, excessive exudate is associated with a wide range of problems:

- Leakage and soiling
- Malodour
- Increased risk of infection
- Frequent dressing changes
- Discomfort
- Pain
- Protein loss and fluid/ electrolyte imbalance
- Periwound skin damage
- Maceration
- Wound expansion
- Psychosocial effects

Consequently, both treating the cause of excessive exudate (for instance compression therapy in venous leg ulcers) and protection of perilesional skin are essential. This is the list of the principal skin protectant ingredients in barrier products, which all have both advantages and disadvantages:

- Petrolatum-based ointment: occlusive and transparent, but may interfere with dressing adherence or produce folliculitis.
- Zinc oxide + petrolatum ointment: occlusive with anti-inflammatory and antioxidant effects, but it may interfere with dressing adherence, and it is opaque.
- Silicone-based barrier preparations (dimethicone): permeable to water vapor and easy to use, but it may also interfere with dressing adherence.
- Film-forming polymers in water or organic solvents: occlusive easy to apply, barrier that allows adherence of wound dressings and protects from skin stripping, but it may produce irritation.
- Cyanoacrylate formulations: it is a moisture resistant and transparent film, which is durable, but it may be expensive, and some patients are allergic to cyanoacrylates.

When talking about leg ulcers, the pillars of management of perilesional skin are the use of optimal compression therapy, skin barrier products and adequate assessment of stasis and contact dermatitis.

DOES THIS PANEL AGREE THAT COMPRESSION THERAPY IS NOT JUST FOR VENOUS ULCERATION?

Speakers: Alison Hopkins, Dr. Elena Conde Montero and Manj Gohel
Report written by Dr. Elena Conde Montero

In this panel discussion 5 speakers from different backgrounds were involved: nursing (Alison Hopkins, Paulo Ramos, Georgina Ritchie), Dermatology (Elena Conde Montero) and Vascular surgery (Manj Gohel).
All the speakers agreed that the answer is yes. It was explained that leg ulcers involve an impairment of the microcirculation, with greater capillary filtration, and, due to the effect of the force of gravity, an increase in intravenous pressure. Consequently, despite the absence of reflux or an obstructive cause, a state of venous hypertension may develop, impeding wound healing. The term "hydrostatic ulcers" has been proposed to refer to leg wounds of different aetiologies that meet this condition.
In this group we should include patients with obesity, immobilization, traumatic wounds, postsurgical wounds, atypical wounds (vasculitis, pyoderma gangrenosum)… Moreover, especially in the elderly, several predisposing factors may overlap, and we have to think about multi-aetiological wounds and wounds in multimorbidity patients.

Despite limited evidence has been published to support the use of compression for non-venous leg ulcers, the experience in the clinical practice for traumatic ulcers and atypical wounds due to pyoderma gangrenosum, necrobiosis lipoidica, vasculitis or Martorell ulcer shows that it may promote wound healing.
The effects of compression therapy on leg wounds are, among others: decreased capillary filtration, increased local lymphatic drainage, reduction of inflammation and increased arterial flow. These benefits may justify the recommendation to use compression therapy, provided it is not contraindicated, in any leg with a wound, mainly severe peripheral artery disease or severe heart failure. However, patients with mild peripheral artery disease or mild heart failure may benefit from compression therapy. Compression therapy could be considered the best anti-inflammatory and anti-gravity treatment for leg ulcers.
Consequently, in addition to the increasing spectrum of indications for compression therapy, even traditional contraindications such as cellulitis have become indications for compression therapy. A recent study has shown that the initiation of compression therapy synchronous to antibiotic therapy, in addition to not increasing the risk of infection spread, reduces inflammation, oedema, and thus may reduce the risk of secondary ulcers.
The generalisation of compression therapy, adapted to the needs of each patient, and always adjuvant to the accurate aetiological treatment of each leg ulcer, may have a great impact on accelerating wound healing.
The art and science of compression should be recognised and promoted. Overly strict guidance leads to fear and harm. We must promote critical thinking.