IMPLEMENTING ZERO TOLERANCE ON THE WARDS: SUSTAINING PREVENTION OF PRESSURE ULCERS IN HOSPITALS

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- Large organisation in South Wales, UK providing primary, community, secondary, palliative and mental healthcare for 600,000 people with 17,000 staff and turnover of £1.2BN

- 4 acute hospitals with 92 wards covering a wide range of specialities

- 77 community care and residential homes
The scale of the problem in 2008

2500 beds

500

Pressure ulcers every month

12% incidence rate

Typical UK hospital 10-15% (category II – IV)
Pressure Ulcers

- Pressure ulcers are devastating
- Pressure ulcers can be life-threatening
- Pressure ulcers can be painful
- Pressure ulcers are expensive
- Pressure ulcers are (mostly) avoidable!
Healthcare budgets are under pressure

Source: A decade of austerity? The funding pressures facing the NHS from 2010/11 to 2021/22 Nuffield Trust
Pressure Ulcers: an avoidable expense

Audit of 1464 hospital in-patients in 2005

Audits of whole Health Board (2500 beds) in 2009 showed around 500 pressure ulcers a month

Est: £2.42M

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<th>Category</th>
<th>Number of ulcers</th>
<th>Estimated cost of treatment (£)</th>
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Cost estimated using Department of Health productivity tool
Hippocratic Oath

“... I will keep them from harm and injustice....”

Every time a patient acquires a pressure ulcer whilst under our care we have failed to protect them from harm.

Prevention is a moral imperative

Citizens now expect this..... and lawyers too!

Declaration of Rio 2011
Why does it still happen?

Pressure Ulcer Prevention – Zero Tolerance
Why does it still happen?

Do we know which patients are at risk of pressure ulceration?

Do we know how pressure ulcers develop?

Do we know how to prevent pressure ulcers?
Why does it still happen?

- Pressure ulcers have become so common that they are seen as an inevitable consequence of frailty, hospitalisation and institutional care.

- Prevention is not thought possible with the rising number of older patients and reduced resources.
The First Law of Healthcare QI

□ Every system is perfectly designed to get exactly the results that it gets …

□ therefore, although not all change is improvement, all improvement is change

*Don Berwick - Institute for Healthcare Improvement [www.ihi.org]*
We need to change something

We need to change the culture!
Change the culture

“Pressure ulcers are nearly always avoidable”

“Pressure ulcers are nearly always inevitable”
How to make sustainable change

The Model for Improvement (Deming)
What change can we make that will result in improvement?

- Study the system
  - What is wrong now?
  - What will deliver the biggest benefit?
- Avoid making change for changes sake
- Focus on things which regularly cause problems
- Do not confuse “information on performance” (targets) with “information on improvement” (how the system is working)
How to introduce change

- Start small
  - One patient, one setting, one service provider
- Take time to do a small scale trial
- Test and retest using Plan, Do, Study, Act cycles [PDSA]
- Only when the change has been reliable for 90-95% of patients, consider spread to more sites
Testing using the PDSA Cycle for Learning and Improvement

**Plan**
- Objective
- Questions and predictions (why)
- Plan to carry out the cycle (who, what, where, when)

**Do**
- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data

**Study**
- Complete the analysis of the data
- Compare data to predictions
- Summarize what was learned

**Act**
- What changes are to be made?
- Next cycle?

Source: Institute for Healthcare Improvement
Care Bundles

- Groupings of best practices with respect to a disease process that individually improve care, but when applied together may result in substantially greater improvement.

- The science supporting each bundle component is sufficiently established to be considered the standard of care.

- The bundle approach to a small group of interventions promotes teamwork and collaboration.
Pressure ulcers were a problem for our patients.

The way we had approached them was not been effective in preventing them and sustaining change.

We need a different way and we need to change the thinking.

The **model for improvement** is a proven tool: we started with the aim, choose measures, ran rapid PDSA cycles. Got people ENGAGED!
Implementing sustained improvement

Zero tolerance: the practical steps
Reduce the Percentage of Hospital acquired Pressure Ulcers (per 1000 patient days) By 50% by 2010

"MEASURE"

**Aim**

**Drivers**

- Risk Identification
- Risk Assessment
- Reliable Implementation of the "SKIN bundle" [Ascension health 2004]
- Identification, grading of pressure ulcers existing on admission /transfer & appropriate intervention
- Education

**Interventions**

- Understand the risk factors for acquiring pressure ulcers
- Understand the local context & analyse local data to assess patients on ward/unit most at risk
- Utilise patient 'At risk' cards to quickly identify those at increased risk

- Assess pressure ulcer risk on admission for ALL patients
- Re-assess skin every 8 hours where necessary
- Initiate and maintain correct and suitable preventative measures

- Address these areas:
  - Surface
  - Keep Moving
  - Incontinence
  - Nutrition

- Initiate and maintain correct and suitable treatment measures
- Utilise the local Tissue Viability nursing expertise

- Educate staff regarding the assessment process, identification and classification of, and treatment of pressure ulcers
- Educate Patients & family
- Develop patient information pack
Assessment

Two essential risk assessment tools:

- **Pressure ulcer risk score**
  - Waterlow™
  - Braden™
  - Professional judgement

Apply SKIN bundle if pressure ulcer risk identified (eg Waterlow score of 15 or above)

- **Nutritional status score**
The SKIN Bundle

- **S**urface the patient sits and lies upon
- **K**eeping the patient moving (or turning)
- **I**ncontinence and keeping skin dry
- **N**utritional state is assessed and managed
Preparation phase

- Staff Briefing and brainstorm sessions
- Develop ‘SKIN Bundle’ communication tool
- Agree metrics and start to measure baseline
- Educate staff with Tissue Viability Nurse [TVN] support
- Ensure pressure ulcer prevention is given high priority e.g. team briefing, posters, visual cues
- Develop patient information leaflets
- Patient involvement is essential
Pilot ‘SKIN Bundle’

- Deming's PDSA methodology commenced with small client group: “Model for Improvement”
- Addressed risk scoring documentation
  - set 100% compliance, daily review
- Audit of SKIN bundle communication tool – daily
## SKIN Bundle Communication Tool for Pressure Ulcer Prevention

**Patient Name:** Mr Dylan Thomas

**Date:**
- 25 May 2010
- 26 May 2010

### SURFACE
1. Therapulse
2. RoHo cushion

### KEEP MOVING
1. Skin assessed
   - Right side
   - Left side

### INCONTINENCE
1. Catheter patent
2. Clean and dry

### NUTRITION
1. Protein drinks
2. Fluid balance

### WATERLOW
18

**SURFACE**
- Therapulse bed 2 minute pulse:
- RoHo for the chair

**KEEP MOVING**
- Pressure areas to be assessed am, pm and night and after return to bed from chair

**INCONTINENCE**
- Catheter patency, record bowel action and ensure patient is kept clean and dry

**NUTRITION**
- Dietician referral, protein drinks x3 per day and maintain fluid balance chart

**WATERLOW**
- Daily or more frequently if dependency increases
Outcome measures [Metrics]

- % Reliability of PU risk and nutritional status scoring
- Document pressure sores of all grades (1 – 4) on Safety Cross if they occur
- Count “days since last pressure ulcer developed on this ward” and display on Safety Cross
- Incident form for any sore grade 2 and above
- Calculate rate per 1000 bed-days
### Days since last Pressure ulcer

- **192 days**

### Safety Cross

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- **No new PU**
- **Ward acquired PU**
- **Patient admitted with PU**
Initial outcomes

- Full compliance with risk score: 100%
- Managing the risk score consistently
- SKIN Bundle communication tool used with patient involvement
- Use of written patient information and education leaflets
Spreading the intervention

- Successful spread to all inpatient wards (92 wards = 2500 beds) in four acute hospitals and all community hospitals across since April 2010
- Further PDSA’s on each ward to encourage ownership by the staff: local modifications allowed
- We continue to monitor the ward “metrics”
- Since June 2012, spread to 77 community care homes and primary care teams
- Further spread across the whole of Wales
Hospital acquired pressure ulcers*

Incidents per calendar month

92 wards and departments:
2500 beds

PU's per month

*category 1-4
Hospital results so far

- One ward: over five years without a pressure ulcer (female orthopaedic trauma)
- One ward, four years without a pressure ulcer
- Nine wards over three years without a pressure ulcer
- Two hospices without a pressure ulcer for one year
- One hospital without a pressure ulcer for six months
Keys factors — to success (1)

- Communication tool – patient partnership
- Staff education and engagement – all staff groups
  “Model for Improvement”
- Create a “Culture of Change”
- Risk scoring and managing those scores
- Tissue Viability Nursing support
- Clear executive engagement
Keys factors — to success (2)

- Celebrate success
  - Internal communications
  - Board briefings
  - Local media

- Letter from DoN after 100 days

- Root cause analysis of every hospital acquired PU

- Supportive not punitive

- Spot audits
Key challenges

- Ward management focus and staff “buy-in”
- Equipment issues
- Maintaining momentum
- Managed roll out
- Publicity / communications
Conclusions

- It is possible to translate evidence-based knowledge into clinical practice in a sustained and effective way.
- Zero tolerance is a realistic objective for hospital acquired pressure ulcers.
- Significant reductions can be achieved in primary care: we are aiming for zero tolerance but have not got there yet.
ANY QUESTIONS?

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http://www.1000livesplus.wales.nhs.uk
Supplementary information

Details of the components of the SKIN bundle
SKIN Bundle of care: implementation

**Surface**
- Mattress and Cushion
- Include safety checks
- Sheet – check for wrinkles etc.
- Reassess pressure ulcer risk score* at least daily

**Keep Moving**
- Reposition patient
- Inspect skin
- Encourage mobility
- Written advice for patient and carers

*: We use Waterlow™ scoring
**SKIN** Bundle of care: Implementation

**Incontinence**
- Toileting assistance
- Continence products
- Specialists
- Non oil-based creams with continence products
- Keep clean and dry

**Nutrition**
- Nutritional risk tool
- Follow instructions
- Ensure optimal intake
- Use of charts if required
- Keep well hydrated