What level of medical input do hospice inpatients need...?

Princess Alice Hospice

Comparing the Need for Medical Input across Two 'Different' Populations:
Inpatients Deemed to Need 'Specialist' or 'Generalist' Nursing Input.

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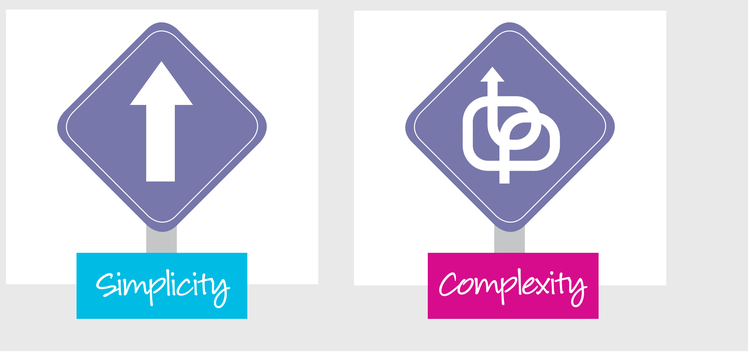
The Presumption



Introduction

Though medical input to hospice inpatients is well-established, the evidence detailing the nature and level of medical staffing is lacking. Moreover, there are calls for hospices to develop less medical, more public health models [1,2].

Significant changes to the running of our hospice inpatient unit (IPU) at the end of 2016 provided a unique opportunity to study the level of need for medical input to our IPU patients. In response to markedly reduced bed occupancy (due to national shortages in trained nurses) and to broaden our 'reach' (to include 'lower-complexity' patients) subsequent nurse skill-mix changes required the IPU to be split equally into generalist nursing (GN) and specialist nursing (SN) beds.

To inform our medical workforce planning, we decided to evaluate the medical need across these potentially contrasting populations. It was suggested that GN-suitable patients would correspondingly have potentially few, if any, medical needs, which in turn should free up medical staff to allow a more equitable redistribution of doctor time to cover known, but unmet, medical need in community patients.

Methods

We performed a service evaluation in a 28-bedded, UK hospice IPU (albeit with reduced occupancy ~60-80% on 24 beds). Initially, by an informal consensus process, we developed a tool to detail the nature and intensity of medical interventions. We subsequently completed a 1-month prospective pilot, globally scoring the perceived patient need for / complexity of, medical input, according to the attending doctor at the end of each day (safety-netted by prompting by a clinical administrator).

[Box 1] **Medical Activity to IPU: 'Level of Activity' Status for IPU:** October 2016 Version 4

Level	High	Medium	Low
Urgency	• Immediate patient review (within 4 hours)	• Prompt patient review (within 4 to 24 hours)	• Case note review (within 24 - 72 hours)
Expectation of input	• At least daily face-to-face medical reviews	• Face-to-face medical reviews every 1-2 days plus daily case note review	• Occasional face-to-face medical reviews, once or twice a week
Complexity of medical / symptom assessment	• High, to reach a new diagnosis, establish any reversibility / prognosis, to exclude urgent need to go to hospital	• Moderately complex, to reach a diagnosis, establish any reversibility / prognosis, to exclude non-urgent need to go to hospital	• Low complexity, to confirm diagnosis/ prognosis, to exclude any reversibility and any need for more detailed medical review
Complexity of medical decision making	• High, to inform, support and guide discussions and agree changes to treatment plans / new ceilings of care	• Moderately complex, to inform, support and guide discussions and agree if changes to treatment plans / ceiling of care are needed	• Low complexity, to support existing discussions and treatment plans / ceiling of care
Points within admission	• First 48 hours • When considering start / stop personalised EoLC plan • When changes in expected outcome of admission • Day of death or discharge	• Days 2 and 3 after admission • Day before discharge	• All other times
Rate of change of overall condition	• Day-to-day changes, possibly reversible causes or possibly imminently dying	• Deteriorating but, no significant change to the illness trajectory	• Relatively stable overall condition
Rate of change of symptoms	• New or day-to-day changes	• Week-to-week changes	• Relatively stable
Nature of symptoms	• Severe and / or acute • Atypical, complex or refractory • Unclear and / or multiple symptoms	• Moderate to severe • Atypical, complex • Multiple symptoms or	• Relatively manageable (clear aetiology, responding to interventions as expected)
Nature of treatment regimens	• Complex, atypical	• Complex, but expected treatment	• Relatively stable medical plan (few / no changes needed / planned)

Results

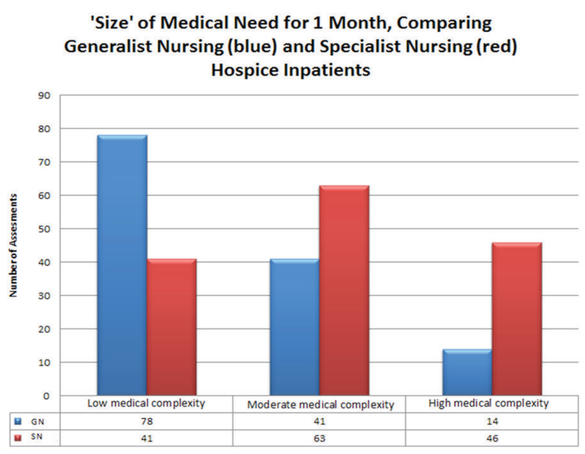
A tool to reflect the overall perceived level of medical need was generated, with 3-ratings (low, moderate, high), scored across 9 items (e.g. urgency, clinical complexity, trajectory, discord) with a final overall 'judgement' (low, moderate, high) [see Box 1.]

284 patient assessments were completed on 50 patients in the calendar month (100% return of completed forms)

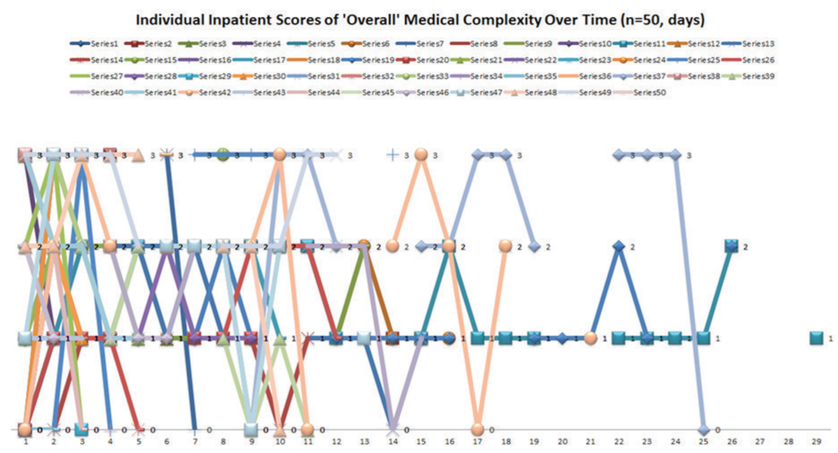
The identified medical need for inpatients were:
- GN beds; low need on 78 occasions, moderate on 41, and high on 14
- SN beds; low need on 41 occasions, moderate on 63, and high on 46

Degree of concordance of perceived medical and nursing complexity (i.e. an 'exact' match) was:
- 58% agreement for GN patients, where a low level of medical matched the lack of complex nursing
- 31% agreement for SN patients, where a high level of medical matched the need for complex nursing [graph 1]

[Graph 1]



[Graph 2]



Discussion

Despite the perceived distinction of hospice inpatients into 'generalist' and 'specialist' palliative care subgroups according to the level of nursing needs, a fluctuating, spectrum of need for medical input was confirmed across both groups. Specifically, high medical needs were not restricted to SN patients and crucially the level of need changed, day to day, during a patient's stay:

- 41% of 'GN patients' had moderate or high medical needs
- 69% of 'SN patients' had low or moderate medical needs.

Perhaps unsurprisingly, across both subgroups, medical needs appeared higher earlier in the course of an admission, then reducing, gradually or with fluctuations, to a lower need after 7 to 10 days [graph 2].

The limited concordance between a patient's perceived need for medical input and their suitability for SN or GN, questioned the wider applicability of this differentiation across the multi-professional team.

However, there was a trend for lower medical input for 'GN' compared to 'SN patients' even if a measurable medical need was identified in all the hospice admissions, even within straightforward-appearing patients (albeit assessed by doctors!), raising potential concerns of the medical issues that might be missed without such doctor assessments.

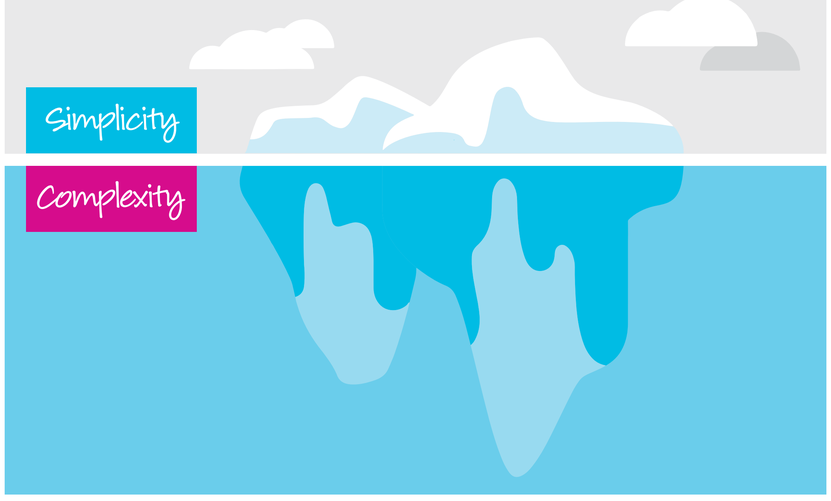
As a preliminary evaluation, there are numerous limitations e.g. un-validated tool, the subjectivity and inter-assessor variability in a 'global score', only scoring perceived need, limited to the first month and an under-reporting of medical input revealed on reanalysis. Additionally, there were 2 patient transfers from 'SN' to 'GN' beds; technically counting as 'discharge' / 'admission', though as only small numbers unlikely to skew the length of stay data.

The actual medical need was higher than recorded, this anomaly resulted from the use of a 5pm daily snapshot; intended to encourage completeness / consistency and to record by room not patient, for anonymity. Subsequently, the score at the census-point was inadequate when:

- Patients died or were discharged before 5pm; scored as 'no need' if the bed was empty at 5pm, or only given a single score for the next occupant, despite potentially high 'medical' needs e.g. last-minute re-assessments, family /MPT discussion and complex letters / medical paperwork.
- Admissions arrived late / after the census time, thus scored as 'none' despite predictably being 2 or 3.
- Weekend medical input was deliberately not included, because only a minority of 'complex' patients would be seen and as on-call cover included external doctors. This does raise important questions around 7/7 working, with predictable unmet medical need in unseen patients at weekends.

The study tool, with 100% completion, proved quick and easy to use, and with minor alterations, appeared suitable for benchmarking the need for medical input. However, further formal validation research and longer-term data are needed before being able to adequately inform our workforce planning. Further evaluation could usefully include the perceived need for Palliative Medicine in other care settings.

The REALITY!



1. Tate T, 'Maximising the contribution of the palliative medicine consultant to meet the future opportunities for hospice care' Help the Hospices Commission, 2013 (www.helpthehospices.org.uk/commission accessed 02.12.2016)
2. Abel J, Kellehear A, 'Palliative care reimagined: a needed shift' BMJ Supportive & Palliative Care 2016; 6: 21–26

Caring when it matters