Hospital In The Home & Emergency Care:

A Private Hospital's Perspective to Patient Flow

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The Setting

– Sydney Adventist Hospital is a not for profit Private Hospital

– Acute care hospital with 342 licensed beds

– Emergency Care annual turnover of 23000 patients

Current problems

- Increase in patient volume
- Increase in clinical complexity
- Delays in accessing acute ward beds
- Delays in services provided by radiology pathology & ancillary services
- Shortage in work force
- Abolishment of ambulance bypass

Issues identified in the last 6 months:

- 25% patients are waiting greater than 12hrs for an acute ward bed
- 6% (270) patients are waiting greater than 24hrs for an acute ward bed
- Average length of stay is increasing

The need for Hospital In The Home

– High demands on beds

– Increasing Elderly Population

– Patient's need for safe alternative

Definition Of Hospital In The Home

" Hospital in the home patients are those who, without the provision of the Acute Medical Outreach Service would require in-patient care by the nature of their medical condition"

What's our solution?

- SAN HITH
- Integrated with Emergency care
- All HITH Doctors must work in EC
- Gatekeeper role

What is the San's Acute Medical Care model?

- HITH + EC
- A direct ward of the Hospital
- Structure & integration is identical to an inpatient ward
- Round the Clock Medical and Nursing on call

HITH + EC = Virtual EMU

- Direct transfer to HITH e.g. Nursing home patients, stable acute medical conditions
- Rapid Turn around is 4-6 hrs
- Admit certain patients overnight then transfer to HITH
- EC and HITH jointly requesting an EMU (currently have 4 bed transit ward)

Our integrated role; Monitoring access issues

- **Entry Issues:**
  - Identify Patients at triage suitable for HITH
  - Seen in the pseudo fast track area
- **Exit Issues:**
  - Promote transfer of patients from the ward
  - Decrease the demand of in patient beds
- **Bed Preservation:**
  - Judiciously utilise available beds
  - Monitor bed occupancy

What's made our "product" popular in our hospital?

- Only patients requiring admission
- Evidence based practice
- Mimic exact in patient treatment
- Best practice guidelines
- Careful monitoring
- On call support
- Positive patient / client feedback

Major DRGS in HITH

DRG	Total	SAH LOS	HITH LOS
E62C Respiratory Infection	*45*	*4*	*3*
J64B Cellulitis W/O CC	*175*	*5*	*5*
J64A Cellulitis W CC	*38*	*8*	*7*
E62C Pneumonia	*45*	*4*	*3*
F63B Deep venous thrombosis	*39*	*4*	*4*
F62B Heart Failure	*3*	*4*	*3*
E65B COAD	*3*	*6*	*6*
F71B Anticoagulation Therapy	*20*	*4*	*3*
061Z Mastitis	*11*	*3*	*2*
L63C Pyelonephritis	*32*	*5*	*4*
D63B Otitis Media/Tonsillitis	*39*	*5*	*5*
B68B Multiple Sclerosis	*11*	*2*	*2*
E61B pulmonary Embolus	16	7	5

HITH length of stay (expressed in days) 3502 days

Continuous (24 Hr) elastomeric infusers

Infuser	Numbers	Picc	Peripheral	Phlebitis
Ben Pen	135	15	120	5
Fluclox	87	18	69	20
Cephazol	25	4	21	2
Ceftazidime	4	2	2	0
Vancomycin	8	8	0	0
Timentin	10	9	1	0

Interesting Cases

Acute Palliative Care :

- Mr GB 39 year old. Diagnosed with metastatic Colonic Cancer. Bowel resection with partial hepatectomy, receiving chemotherapy.

- Second presentation to HITH. Initially bronchopneumonia, grew strep pneumoniae. Treated with Ceftriaxone.
- Current presentation, febrile(39c), night sweats, no obvious chest sx, no urinary sx, microscopy and chest x-ray unremarkable.
- WCC 2.3 neutropenic (0.3) & raised CRP 156

Discussed with Oncologist

- Commence Timentin infusion (via Port a Cath) & daily Gentamicin
- Daily FBC & CRP
- Day 3 – no improvement changed to Vancomycin
- Discharged day 11- afebrile neutrophils 5.28 & CRP 65

Outcome

- Assessed in Emergency care
- Identified as suitable for HITH
- Rapid turn around to home (7hrs)
- Entire episode of care managed at home
- True in hospital substitution
- Best practice guidelines
- Bed preservation
- Febrile neutropenia at home
- Quality holistic care for patient with Ca

MR P.S, 76 yr old lives at home in his unit with his elderly wife.

- PHx: Diagnosed 6 years ago with prostate cancer which was initially well controlled.
- In the last six month the tumor had become more aggressive with metastasis to his long bones.

- Presented to SAN emergency with a 4 day history of mild SOB gradually worsening. Febrile and some pleuritic pain.

- Clinically, temp 37.5° C, HR 89bpm, BP 110/75, RR 20/min, Sa02 96%.

- Bibasal crepitations .

- CXR: mild Right basal consolidation.
- ECG: Sinus Rhythm no evidence of ischemia

- HB 115, WCC 13.2, CRP 45.
- Slight impaired renal function with no evidence of liver abnormality.
- Admitted to HITH and managed with Benzyl Penicillin and Rulide.
- On day 3, still complained of breathlessness , though pleuritic pain had improved.
- (Daughter community nurse organized home oxygen through Neringah).
- Discussed with Oncologist and was brought back to hospital for Echocardiograph and V/Q scan.

Results

- High probability of PE
- Commenced on Low molecular weight heparin
- Warfarinised
- Discharged to care of family doctor

Outcome

- Diagnosis made in EC
- Treated out of hospital
- Medical team provides coordinated care
- Bed preservation
- Patient satisfaction

Nursing home patients:

- Acute renal failure 2° acute dehydration from oral candidiasis
- Acute lower lobe pneumonia (Sa02 87%)
- Acute Urinary Tract Infection
- (febrile, mild dehydration, WCC elevated, Crp elevated)
- Acute cellulitis (elevated markers)

- Gentle intravenous hydration
- Creatinine improved from 256 to 135
- IV Benzyl penicillin and oral Rulide and oxygen
- Intravenous fluids, Gentamicin and Ceftriaxone
- Intravenous Flucloxacillin or Benzyl penicillin

Is this model sustainable?

- Hospitals too expensive
- Federal & State pressure to make hospitals last resort
- Outreach programmes are gaining recognition
- Public system - rationalisation of current funding
- Greater utilisation by doctors if aligned with **EC and managed by EC**

Conclusion

- HITH is a true substitution for in hospital in-patient care
- Entire episode of care managed externally
- Decreasing hospital expenditure
- Likely to grow as patient's request optimal medical care with
- minimum lifestyle disruption
- Greater push from government to optimize better bed usage
- A solution to access issues