

Improved care at reduced cost –making the business case for an advanced liver disease MDT

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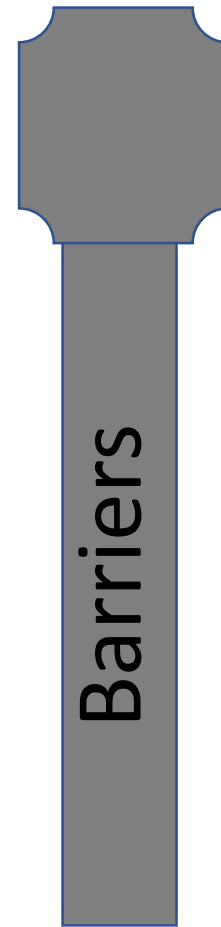
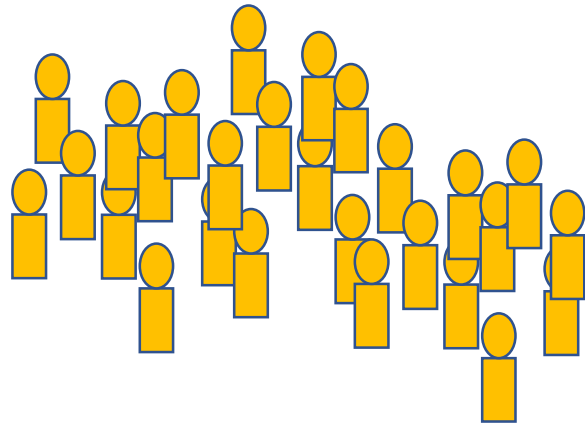
Why doesn't everyone with liver disease, nearing the end of life, get the same great care?

- We already know what good looks like.
- We have been talking about it for ages.
- More and more people in this meeting every year

“Fine words,
butter no
parsnips”



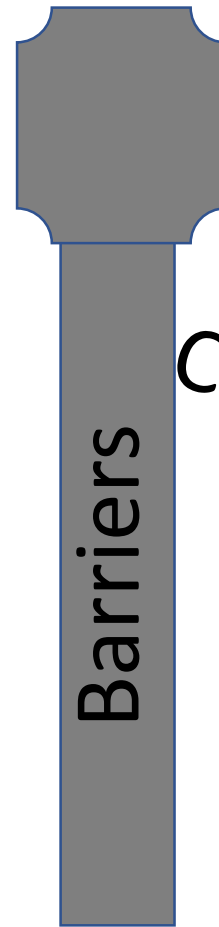
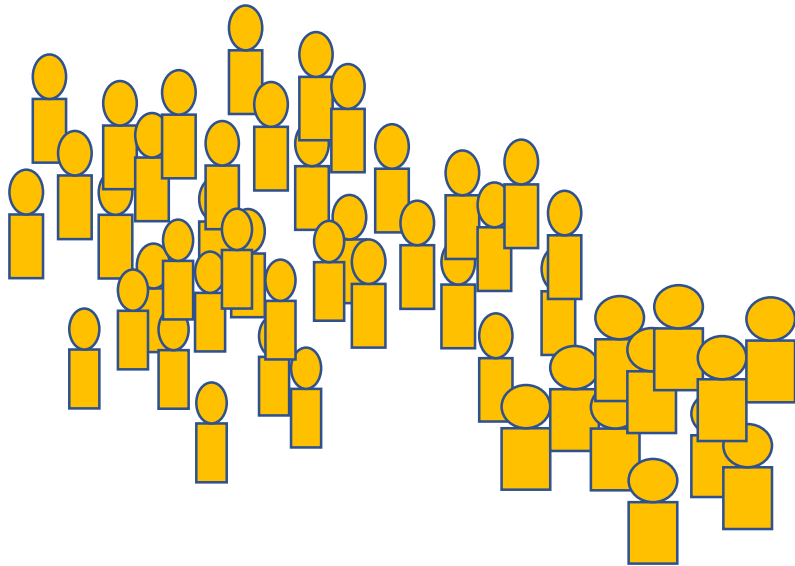
Huddled masses outside
the walls.



What are these?

Good
Palliative +
supportive
Care

Huddled masses outside
the walls growing in
number.

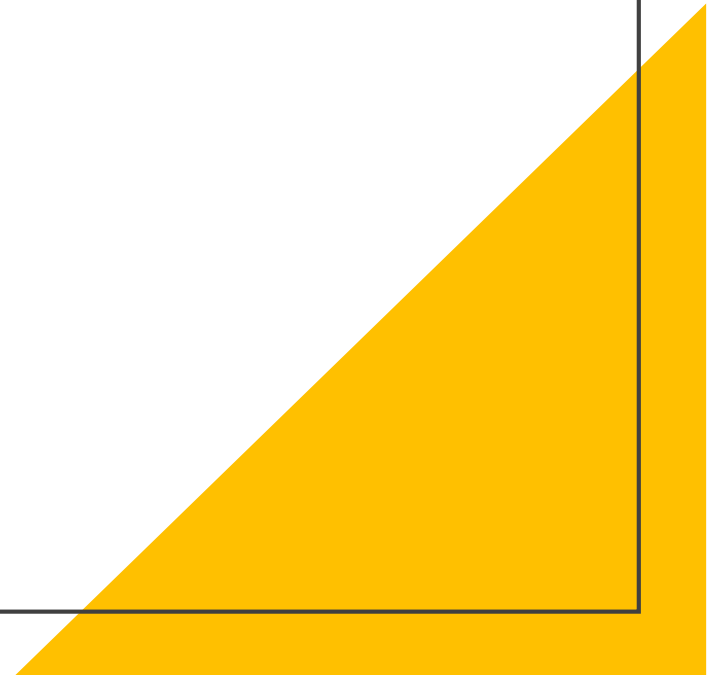


Barriers



“Lead hospital finance officers
by the wallet and their hearts
and minds will follow”

*Adapted from a better
known saying, attributed to
General James N. Mattis.



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What have we done?

- Produced a ready to go, “off the shelf” business case for an advanced liver disease service with an emphasis on palliative and supportive care.



What does good look like?

- Delphi process using members of BASL SIG and PPI from LiVeR North and the BLT
- Design (and name) the ideal service
- Mixture of Hepatology and Palliative care consultants
- Hepatology, Alcohol and Palliative care nurses
- Patients



Structure of the service

- Nurse led ascitic drain service and liver ANP
- Advanced liver disease MDT and Clinic
- Phone access for patients- with sign posting
- Core staff identified as essential to those components and %WTE required of each
 - Including time for palliative care consultant and CNS, hep con time, dietician and alcohol nurse time.
- KPIs

Example of costs for this “dream team”

Based on:

Monthly MDT meeting

Monthly Clinic (2 new, 2 FU)

Monthly

Ascitic drain service, ward input and Hepatology hot line		
1.0 WTE Hepatology Nurse Band 6 or 7	52770	65364
Palliative care community nurse - 1 day per week		
0.2 WTE Palliative Care Nurse Band 6 or 7	10554	13073
MDT (1hr per month/ 0.0625 PA)		
Band 6/7 Hepatology Nurse	Included	
Band 6/7 Palliative Care Community Nurse	Included	
0.0067 WTE Band 7 Alcohol Care Nurse	438	
0.0067 WTE Band 7 Dietician	438	
0.0067 WTE Band 5 Ward Nurse	326	
0.2 WTE Band 3 MDT Co-ordinator	6627	
Hepatology Consultant	851	
Palliative Care Consultant	851	
Clinic (4hrs once per month/1 PA once per month)		
0.027 WTE Dietician B7	1765	
Hep Nurse B6/7	Included	
Palliative Care Nurse 6/7	Included	
Hepatology Consultant	3,375	
Palliative Care Consultant	3,375	
Palliative Care Ward Support (1PA per week)		
Palliative Care Consultant	13,500	
Palliative Care Clinic (once per month/ 0.25 PA per week)		
Palliative Care Consultant	3375	
Total cost of service	Band 6 model	Band 7 Model
	98,245	113,358

Methodology

- Costing of patients in last year of life performed using patient-level costing reports and collating costs from each admission to UHS and calculating total cost.
- Total admissions
 - Elective and non elective, ICU admissions, Total bed days
- Patients discussed at least once by palliative care MDT were compared with patients who died without having been reviewed by palliative care.
- Averages calculated and compared between groups.

What we did with this data

- We compared costs, bed days, ICU bed days between those who died with and without palliative care team input.
- Based on the proportion who had seen palliative care and the benefits this bought,
 - we modelled the effect of expanding services to provide palliative care for different proportions.
 - Compared costs and savings in a generic NHS Business case.

Evidence (From UHS pilot data)

- 168 patients who were admitted either electively or non-electively from 1st Jan 2021 to 31st Dec 2022 with a primary or secondary diagnosis relating to advanced liver disease who have subsequently died were included.
- 16% of patients had palliative care support (27 of 168 patients).
- The average cost of non-elective admissions in these patients results in reduced costs of £3,830.34 per patient. There is also an estimated saving of 6.3 non-elective bed days per patient.

	Palliative care	No palliative care
Average number of non-elective admissions	3.1	2.9
Average non-elective bed days	19.4	25.7
Average cost of non-elective admissions	£ 14,728.16	£ 18,558.50
Lowest non-elective admissions cost	£ 0.00	£ 0.00
Highest non-elective cost	£ 37,387.53	£ 86,825.43

Use of ICU beds

- Seen by Palliative care 5/27 (18.5%) mean LOS 6 days
 - 30 days total
- Not seen by Palliative care 43/141 (30%) mean LOS 6.1 days
 - 262 days total

Time to death from 1st admission in LYOL

- 6 months in palliative care group
- 5 months in non- palliative care group

Extrapolating these numbers

- Limits to the proportion under the service at any single trust
- But to illustrate: if you have a very large patient population...

Number of patients under palliative care	Estimated cost savings	Estimated bed day savings
24 patients 14%	£91,928.16	151.2
48 patients 28%	£183,856.32	302.4
96 patients 56%	£367,712.64	604.8
192 patients 112%	£735,425.28	1209.6

	Monthly model	Twice monthly model	Weekly model	Twice- weekly model
New activity				
New outpatient attendances	24	48	96	192
Follow-up outpatient attendances	24	48	96	192
Elective ascitic drains	104	104	104	104
Non-elective bed day savings	151.2	302.4	604.8	1209.6
Financial implications				
Staff costs	£98,245	£109,495	£143,046	£224,786
Income from new activity	£143,896	£151,864	£167,800	£199,672
Non-elective admissions savings	£91,928.16	£183,856.32	£367,712.64	£735,425.28

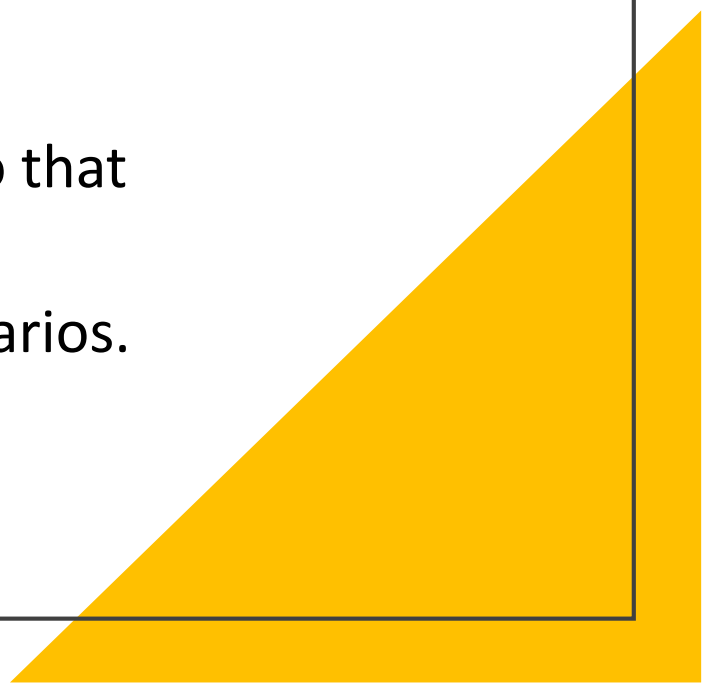
Base example expanded

- Clinic and MDT multiplied
- Hep ANP full time across all groups

Limitations

- We don't know if this would apply in every trust
 - Eg DGH where no-one with liver disease goes to ICU (or gets sent elsewhere) won't see the benefit of avoiding ICU admissions
- Would be more robust if we had data from other trusts.
- We don't know what the upper limit of palliative care team referrals is in terms of showing these benefits

What's the problem with generating an income?

- The savings are the Trusts, BUT
 - To the payer, it's a cost potentially (with PBR)
 - Need to come to an arrangement with the payer (ICS) so that both trust and payer benefit.
 - So we illustrate this with some (plausible) financial scenarios.
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ICS funds the income from the new activity to the provider, and the staff costs associated with the model are paid for by the provider.

	Option 1: Monthly model	Option 2: Twice monthly model	Option 3: weekly model	Option 4: Twice weekly model
Staff costs (Provider)	£98,245	£109,495	£143,046	£224,786
Income for new activity (ICS)	£143,896	£151,864	£167,800	£199,672
Non-elective admission savings (PbR)	£91,928.16	£183,856.32	£367,712.64	£735,425.28
Overall cost to ICS (expense/ saving)	£51,967.84	+£31,992.32	+£199,912.64	+£535,753.28
Overall cost to Provider (expense/ saving)	+£45,651.00	+£42,369.00	+£24,754.00	£25,114.00

The ICS would therefore retain savings for non-elective admission reductions in this cohort.

ICS to fund the costs for the new staffing model but not pay for the new activity. In this model, the provider and the commissioners could agree a split of the savings accumulated as a result of reduced non-elective admissions in this cohort of patients.

	Option 1: Monthly model	Option 2: Twice monthly model	Option 3: weekly model	Option 4: Twice weekly model
Staff costs (ICS)	£98,245	£109,495	£143,046	£224,786
Income for new activity	£0	£0	£0	£0
Non-elective admission savings (PbR)	£91,928.16	£183,856.32	£367,712.64	£735,425.28
50% non-elective admission savings	£45,964.08	£91,928.16	£183,856.32	£367,712.64
Overall cost to ICS (expense/ saving)	£52,280.92	£17,566.84	+£40,810.32	+£142,926.64
Overall cost to Provider (expense/ saving)	+£45,964.08	+£91,928.16	+£183,856.32	+£367,712.64

Using the above funding models, option 3 (weekly clinic model) would be the most financially beneficial model for both the provider and the ICS regardless of which funding model is utilised. Both option 3 and option 4 would be financially beneficial for both the provider and ICS if staff costs were funded by the ICS and savings on reduced non-elective admissions were split between both parties.

In Conclusion

- We have established the shape of service and its costs
- We have produced a business case for dissemination.
- We know (within certain limits) what the potential for savings is
- We have identified funding models that may be acceptable to payers and providers alike
- We have a methodology, whereby other trusts could run their own figures
- We can make this freely available via society websites