RESEARCH

Palliative care for cirrhosis: a UK survey of health professionals’ perceptions, current practice and future needs

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ABSTRACT

Objective To determine the knowledge and practice patterns of a UK cohort of relevant healthcare professionals (HCPs) about delivering palliative care in cirrhosis, and to inform priorities for future research.

Design An on-line questionnaire survey with closed and open responses.

Setting HCPs identified from the mailing list of special interest groups in hepatology and gastroenterology (liver), general practice and specialist palliative care (SPC) across the UK.

Results Of the 6181 potential contacts identified, 517 HCPs responded. Most believed a role exists for SPC in caring for people with cirrhosis, but many SPC HCPs felt ill prepared to provide good care to those facing death. Further training was needed in managing liver-related symptoms, symptom control and end of life issues. All HCP groups wished to increase community provision of palliative care support, but many general practitioners felt unable to manage advanced cirrhosis in the community. There were differences in the optimal trigger for SPC referral with liver HCPs less likely to refer at symptom deterioration. Prognostication, symptom management and service configuration were key areas identified for future research.

Conclusions All who responded acknowledged the role of SPC in caring for those dying with cirrhosis and need for further training to improve confidence and enable joint working between SPC, general practice and liver teams. Low response rates make it difficult to generalise these findings, which require further validation.

INTRODUCTION

Liver disease is the third largest cause of premature death in the UK1 and accounts for 2% of deaths in England.2 The increases in alcohol consumption, viral hepatitis and obesity in the UK suggest that liver disease is a growing public health problem.3 People with end stage liver disease (cirrhosis) have supportive and palliative care needs.4–7 The recent Lancet Commission report on improving liver care acknowledges the importance of primary care and hospital services in providing high quality care for people with cirrhosis.1 Nevertheless it skims over the care issues arising for those who are dying of liver disease. At present, this care is poor,8 most deaths from cirrhosis occur in hospital2 and more work is needed to understand how end of life (EoL) care for people with cirrhosis can be managed well.

The Royal Free Hospital London (tertiary centre) liver team and the Marie Curie Palliative Care Research Department, University College London held a national meeting of health professionals interested in these aspects of liver care in November 2013. The group recommended a national survey of primary, secondary and tertiary care providers to explore current attitudes and practices, and to identify training needs, ideas for service improvement and research priorities. Here we report the findings of this survey.

METHODS

We developed an online survey (see online supplementary appendix ii) to explore (A) referrals to specialist palliative care (SPC)—numbers, reasons, timing; (B) health professionals’ training needs;
Reasons for referrals to SPC, from liver professionals and GPs were symptom control, terminal care and the need for hospice admission (table 2). Most liver and SPC professionals identified recognition of the EoL as the key trigger for SPC referral in cirrhosis. SPC professionals also considered onset of deterioration in symptoms and recurrent hospital admissions as appropriate triggers for referral to their service (table 2).

EoL care for cirrhosis in primary care
Over half of GPs (55%; 22/40) felt their patients could be managed in the community, but only 24% (10/41) had actually received a referral from liver centres. Confidence in managing patients in the community was attributed to good support from community nursing or local SPC teams. Barriers were the perceived unpredictable nature of cirrhosis and patients’ social circumstances (especially those actively drinking).

Skills levels and training needs
Although most SPC professionals (60%; 147/246) and GPs (54%; 22/41) were confident in their skills and knowledge to manage people with cirrhosis, all recognised the need for further training on issues specific to liver disease; liver professionals and GPs identified symptom control and training in EoL issues as the two key topics to address (table 3).

Open response data showed that liver professionals need improved awareness of supportive care including symptom control at EoL, advanced communication skills in discussing prognosis with patients and families, and help to shift the emphasis of care from an interventionist to a more supportive role; liver personnel and GPs need improved knowledge on how SPC could support them to care for people with advanced cirrhosis and the processes of accessing community SPC.

Liver professionals felt that primary care and SPC needed specific training in understanding the

Table 1 The number of patients referred to specialist palliative care (SPC) from liver professionals by type of care and diagnosis

<table>
<thead>
<tr>
<th>Reason for referral to SPC</th>
<th>Number referred by liver professionals to SPC</th>
<th>Number of referrals received by SPC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inpatient care</td>
<td>Outpatient care</td>
</tr>
<tr>
<td>N</td>
<td>Per cent</td>
<td>N</td>
</tr>
<tr>
<td>---</td>
<td>---------</td>
<td>---</td>
</tr>
<tr>
<td>None</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>1–5</td>
<td>45</td>
<td>28</td>
</tr>
<tr>
<td>6–10</td>
<td>49</td>
<td>30</td>
</tr>
<tr>
<td>11–20</td>
<td>38</td>
<td>24</td>
</tr>
<tr>
<td>21+</td>
<td>22</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>161</td>
<td>161</td>
</tr>
</tbody>
</table>
unpredictable trajectory of cirrhosis and the impact of impaired liver function on medication metabolism. SPC professionals recognised their training needs on liver specific issues such as the assessment and management of decompensated liver disease (86%; 198/231), pharmacology in cirrhosis (79%; 182/231), likely illness trajectory in cirrhosis (68%; 159/231), advances in the management of recurrent ascites (68%; 158/231) and information on prognostication (68%; 158/231).

### Initiatives for improving EoL care in cirrhosis
Liver professionals suggested enhanced provision of palliative care whereas most SPC professionals prioritised improved liaison between secondary and primary care. GPs also favoured improved liaison (33/158; 86%).

### Table 2  Referrals to SPC for cirrhosis: reasons and timings

<table>
<thead>
<tr>
<th>Reason for referral to SPC by specialty</th>
<th>Liver professionals</th>
<th>General practice</th>
<th>Specialist palliative care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Per cent</td>
<td>N</td>
</tr>
<tr>
<td>Symptom Control</td>
<td>137</td>
<td>88</td>
<td>12</td>
</tr>
<tr>
<td>End of life issues</td>
<td>138</td>
<td>89</td>
<td>12</td>
</tr>
<tr>
<td>Hospice/palliative care</td>
<td>123</td>
<td>79</td>
<td>9</td>
</tr>
<tr>
<td>Social/family</td>
<td>73</td>
<td>47</td>
<td>8</td>
</tr>
<tr>
<td>Bereavement support</td>
<td>39</td>
<td>25</td>
<td>3</td>
</tr>
<tr>
<td>Ethical decision making</td>
<td>11</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Communicating difficult news</td>
<td>7</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>155</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

### Most appropriate times for referral to SPC by specialty

<table>
<thead>
<tr>
<th>Time for referral to SPC by specialty</th>
<th>Liver professionals</th>
<th>General practice</th>
<th>Specialist palliative care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Per cent</td>
<td>N</td>
</tr>
<tr>
<td>End-stage/end of life</td>
<td>158</td>
<td>89</td>
<td>223</td>
</tr>
<tr>
<td>Deterioration in symptoms</td>
<td>105</td>
<td>59</td>
<td>198</td>
</tr>
<tr>
<td>Recurrent hospital admissions</td>
<td>111</td>
<td>63</td>
<td>180</td>
</tr>
<tr>
<td>Consideration of referral to tertiary liver centre, for example, for liver transplant assessment</td>
<td>32</td>
<td>18</td>
<td>59</td>
</tr>
<tr>
<td>Initial diagnosis</td>
<td>12</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>177</td>
<td></td>
<td>245</td>
</tr>
</tbody>
</table>

SPC, specialist palliative care.

### Table 3  Comparison of training needs and initiatives to improve end of life care for patients with cirrhosis by specialty

<table>
<thead>
<tr>
<th>Comparison of training needs of liver and general practice professionals</th>
<th>Liver professionals</th>
<th>General practice</th>
<th>Specialist palliative care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Per cent</td>
<td>N</td>
</tr>
<tr>
<td>Symptom control</td>
<td>101</td>
<td>66</td>
<td>31</td>
</tr>
<tr>
<td>End of life issues</td>
<td>101</td>
<td>66</td>
<td>18</td>
</tr>
<tr>
<td>Ethical decision making</td>
<td>55</td>
<td>36</td>
<td>9</td>
</tr>
<tr>
<td>Bereavement counselling</td>
<td>52</td>
<td>34</td>
<td>7</td>
</tr>
<tr>
<td>Social/family</td>
<td>45</td>
<td>29</td>
<td>8</td>
</tr>
<tr>
<td>Communicating difficult news</td>
<td>40</td>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
<td></td>
<td>34</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initiatives that would improve end of life care for patients with cirrhosis by specialty</th>
<th>Liver professionals</th>
<th>General practice</th>
<th>Specialist palliative care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved liaison between secondary and primary care</td>
<td>69</td>
<td>39</td>
<td>90</td>
</tr>
<tr>
<td>Improved provision of specialist palliative care</td>
<td>86</td>
<td>48</td>
<td>64</td>
</tr>
<tr>
<td>More education opportunities in specialist liver units</td>
<td>21</td>
<td>12</td>
<td>71</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>179</td>
<td></td>
<td>245</td>
</tr>
</tbody>
</table>
39; 85%), more educational opportunities in specialist liver units (26/39; 67%) and improved provision of SPC (18/39; 46%).

Analysis of open responses from 137/195 liver professionals (88 doctors and 49 nurses), identified specific and more detailed improvements which could be made to the delivery of EoL care, in reconfiguring services and improving clinicians’ skill base:

i. **Earlier SPC involvement**: Significant time points in the patient journey, such as assessment for liver transplantation, repeated hospital admissions or onset of need for regular paracentesis could prompt SPC referral. Understanding of appropriate triggers and markers of deterioration may support health professionals to recognise when symptomatic patients would benefit from SPC which can be delivered in parallel with more aggressive treatments.

ii. **Better community provision of liver services**: Better liaison between liver teams, primary care and SPC could enable patients to receive community nursing and paracentesis, enhanced by hospice outpatient services to provide support and symptom control as required, which may reduce emergency admissions to hospital.

iii. **Development of clearer care pathways**: Understanding of care pathways would guide liver professionals to identify which patients with cirrhosis had reached the EoL phase and what to do next. An EoL pathway would provide a framework to consider withdrawal of medication and opportunities for patients and those close to them to access counselling and support.

iv. **Ways of improving communication skills**: Liver professionals recognised that patients and family members had little understanding about their disease or its severity. At the same time, they themselves lacked confidence in having honest discussions about these topics. Sharing of information about the disease, its likely trajectory and symptoms might allow more open discussions about future care, and choices about place of care, interventions and services available.

### Key priorities for future research

Open responses on research priorities were received from 221 participants. **Table 4** highlights the key findings. (1) Disease specific information—all groups highlighted the need to understand: symptom control (in particular how best to manage recurrent ascites, pruritus and encephalopathy, and opioid pharmacology when liver function is compromised), and prognostication (in particular identifying the earliest point when deterioration is irreversible); (2) Service models—SPC and liver professionals prioritised exploring whether palliative care adds value (economical or quality of life), the best way of managing patients in the community to avoid hospital admissions, and the evaluation of an early palliative care intervention versus usual care; understanding would be enhanced by exploring the experience of patient and their family members in (A) their understanding of prognosis and their own wishes about future preference of care (B) what specific needs they have as a result of the illness.

### DISCUSSION

This is the first UK-based national survey on the perspectives of health professionals responsible for delivering care to people with cirrhosis who are facing death.

Referrals from liver teams to SPC are relatively uncommon and usually made late in the illness when death is very close. Understanding of the role of SPC was poor. All health professionals, irrespective of specialty, recognised that they required further training to improve their skills in caring for people with advanced cirrhosis. For SPC, this training centred on increasing awareness of specific issues involved in managing patients with liver disease, such as the implications of impaired liver function on symptom control and medication use. For liver professionals, future training should support them to identify

### Table 4  Research themes identified by discipline

<table>
<thead>
<tr>
<th></th>
<th>SPC (n=114)</th>
<th>Liver professionals (n=93)</th>
<th>General practice (n=14)</th>
<th>Total (n=221)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease-specific information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptom management</td>
<td>59</td>
<td>35</td>
<td>6</td>
<td>100</td>
</tr>
<tr>
<td>Prognosis</td>
<td>23</td>
<td>18</td>
<td>1</td>
<td>42</td>
</tr>
<tr>
<td>Needs assessment</td>
<td>11</td>
<td>15</td>
<td>1</td>
<td>26</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>6</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Psychosocial impact</td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Stakeholder understanding of liver disease</td>
<td>2</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>New treatments</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>Service model approaches</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimal service structure</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Evaluating added value of palliative care</td>
<td>8</td>
<td>5</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Barriers/improving access to SPC</td>
<td>8</td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How to improve management of liver patients</td>
<td>3</td>
<td>3</td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

SPC, specialist palliative care.
patients for whom cure is no longer likely and to shift
the emphasis of care from burdensome interventions
to a more supportive care role. All groups recognise
the need for collaborative working earlier in the
illness so that discussions about the future can be
raised at key points such as transplant assessments or
exacerbations of symptoms. We identify symptom
management, prognostication, and overall service
structure as key areas for future research.

Our findings support key recommendations from a
recent review of palliative care in end stage liver
disease including better collaboration between liver
health professionals and SPC and the identification of
potential triggers for palliative care consultations.4
Our work also supports recommendations from the
Lancet Commission report on the role of primary care
in liver disease and the need for community hepatol-
yogy posts for GPs to work more closely with liver
professionals.1

Lessons can be learned from research on the man-
age of people with other advanced non-
malignant diseases. In the UK, in advanced heart
failure10 and advanced kidney disease11 shared care
approaches have been developed involving multipro-
fessional collaboration between primary care and spe-
cialist services, and SPC input when required. The key
elements are sensitive communication with patients
and their families especially earlier in the illness, holis-
tic assessment and care involving multiprofessional
working across boundaries. While planning at a
national level is not easy, on a local level, it would be
important to improve education and coordination of
service provision between liver specialists, GPs and
SPC professionals.

We note the very low response rate to our survey,
which currently limits the generalisability of our find-
ings which require further validation. This low
response rate may be due to limitations in our
methods. Data protection issues prevented us from
accessing mailing lists directly, which was the responsi-
bility of the special interest groups, so the delivery of
the mail-out was inconsistent. Email circulations may
have been incomplete, and overlap in the membership
of our targets groups (eg, BASL and the BSG liver
section) may underestimate the response rate.
However, our highest response rate of 24% achieved
from SPC is still lower than the 33%12 considered
standard for on-line surveys. It is possible, but we
cannot be certain that there is currently a reluctance
to consider issues of EoL care among those working
with people with cirrhosis. However, it is likely that
the potential benefits of a palliative approach to care,
either early and in parallel to more aggressive treat-
ments, or in managing the terminal phase are not yet
recognised.

Our response rates might have been higher had the
research team been able to access directly the mailing
list from each of the different organisations. This
would have enabled the research team to check for
duplicate participants and personalise the invitation
letter before sending out to each health professional.
We might also have been able to ensure that each
non-responding professional received up to two
follow-up emails to encourage their participation in
the survey. Furthermore, if finances were available,
we would have given participants on receipt of their
response a non-monetary incentive such as Amazon
gift cards to be used for educational purposes. Some
of these initiatives have been identified in a Cochrane
review as increasing response rates in electronic
surveys.13

CONCLUSION
While there are plans to address the high mortality
from liver disease, these initiatives will be slow to
demonstrate any impact on mortality figures and
many will continue to die with high symptom burden
and little care planning at the EoL. The financial chal-
enges faced by the NHS over the next years as out-
lined by the NHS England Chief Executive14 confirm
that we cannot expect significant financial support to
address the problem. We recommend research that
takes account of economic costs and benefits, and
improves our understanding of the needs of patients
with cirrhosis and their families, enhances communica-
tion with those at risk of death, enables smoother
links across care boundaries, and informs training for
all professionals involved in treatments and care.

Key messages

What is already known about this subject?
▸ There is increasing number of deaths from liver
disease in the UK.
▸ Most deaths from liver disease occur at a relatively
young age and in patients with a higher degree of
social deprivation.
▸ Access to palliative care for people with end stage
liver disease (cirrhosis) has been limited and most
deaths from cirrhosis occur in hospital.

What this paper adds?
▸ This study is the first UK national survey to specific-
ally explore current attitudes and practices of differ-
ent health professionals caring for patients with
cirrhosis near the end of life, using on-line survey
methodology.
▸ We identify symptom management, prognostication,
and overall service structure as key areas for future
research.

How might it impact on future clinical practice?
▸ Increase collaborative working between liver profes-
sionals and specialist palliative care to meet the
needs of patients with end stage liver disease.
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Contributors JL, VV and SD were responsible for the conception and design of this work, acquisition, analysis and interpretation of data, drafting the work and giving final approval. JB was responsible for the design of the work, data analysis and interpretation, drafting the work and giving final approval. LG, KH, AM, DT and LJ were responsible for the design of this work, revising it critically for important content, and giving final approval.

Competing interests None declared.

Ethics approval UCL Ethics committee (3552/002).

Provenance and peer review Not commissioned; externally peer reviewed.

Data sharing statement Extra data is available by emailing Dr Joe Low at joseph.low@ucl.ac.uk.

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